



2021

ANNUAL
OPERATING
BUDGET
& CAPITAL IMPROVEMENT PROGRAM

Fiscal Year Ending December 31, 2021 — San Antonio, Texas

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ANNUAL OPERATING BUDGET AND CAPITAL IMPROVEMENT PROGRAM

FISCAL YEAR ENDING DECEMBER 31, 2021

DOUGLAS EVANSON
SENIOR VICE PRESIDENT & CHIEF FINANCIAL OFFICER

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GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished
Budget Presentation
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PRESENTED TO

San Antonio Water System

Texas

For the Fiscal Year Beginning

January 1, 2020

Executive Director

The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to **San Antonio Water System, Texas** for its annual budget for the fiscal year beginning **January 1, 2020**. In order to receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan and as a communications device.

This award is valid for a period of one year only. We believe our current budget continues to conform to program requirements, and we are submitting it to GFOA to determine its eligibility for another award.

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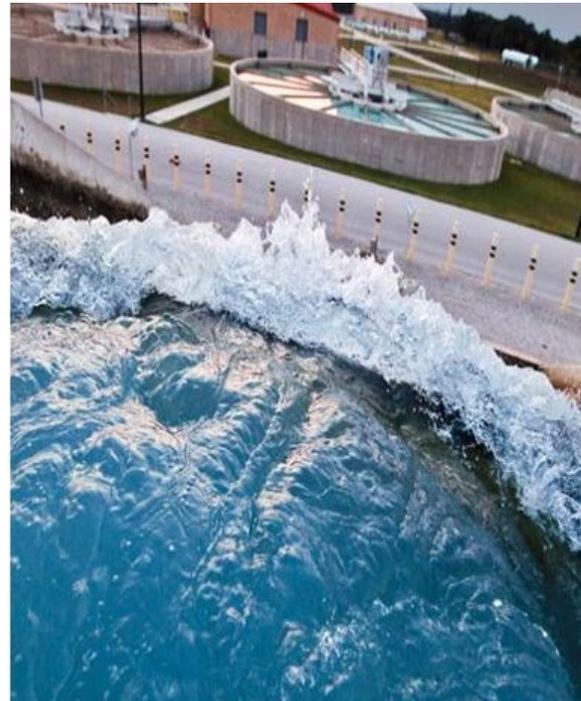
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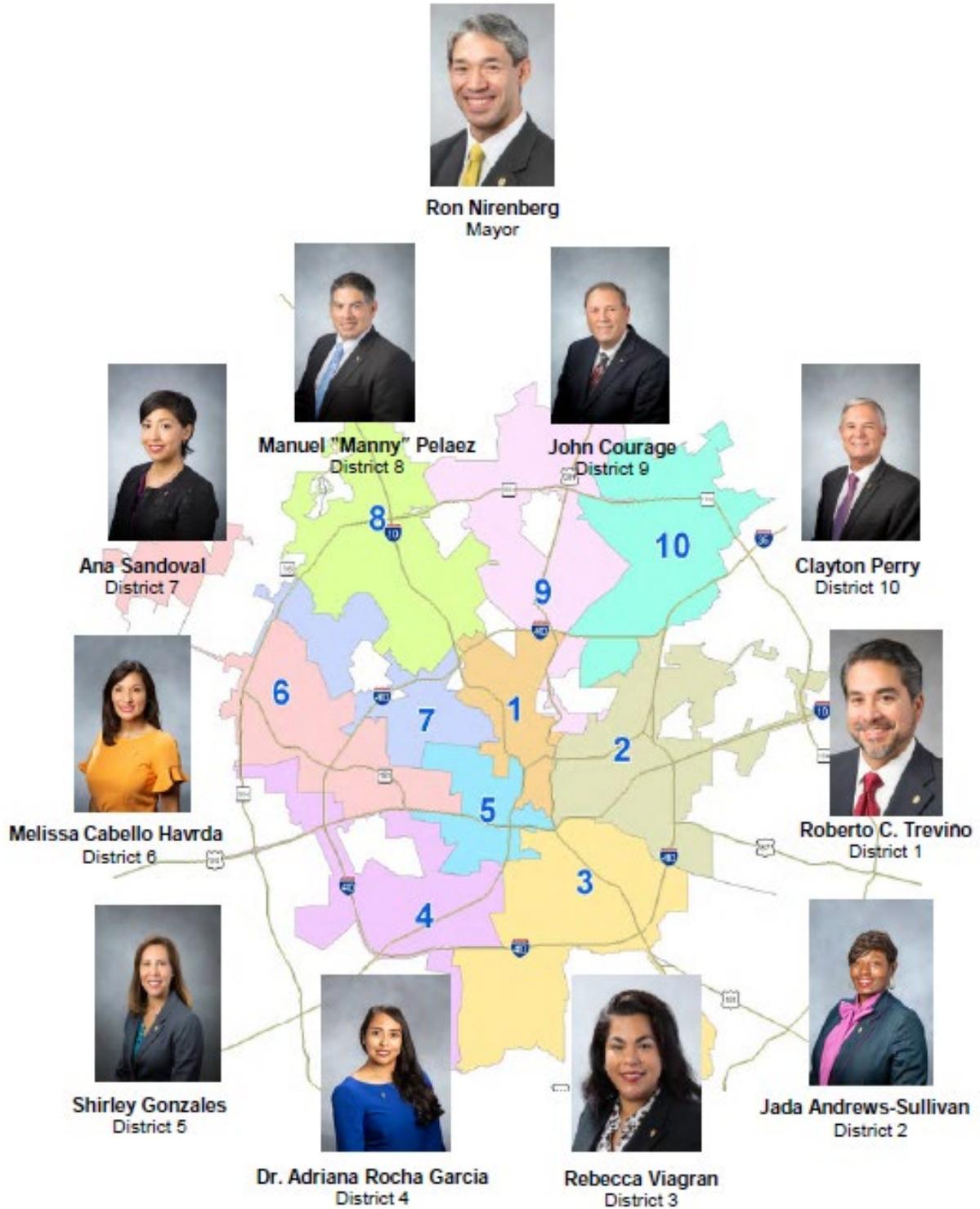
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CITY OF SAN ANTONIO
MAYOR AND CITY COUNCIL



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SAN ANTONIO WATER SYSTEM BOARD OF TRUSTEES



Jelynne LeBlanc Burley
Chairwoman



David McGee
Vice Chairman



Eduardo Perra
Secretary



Amy Hardberger
Assistant Secretary



Edward Belmares
Trustee



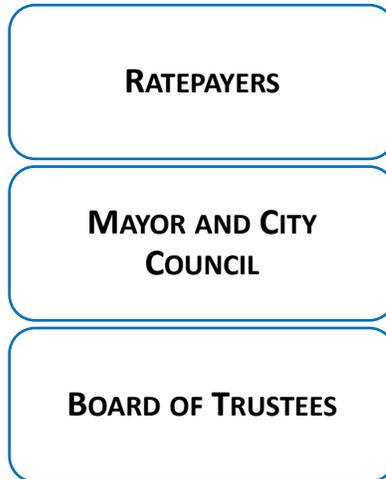
Leticia Ozuma
Trustee



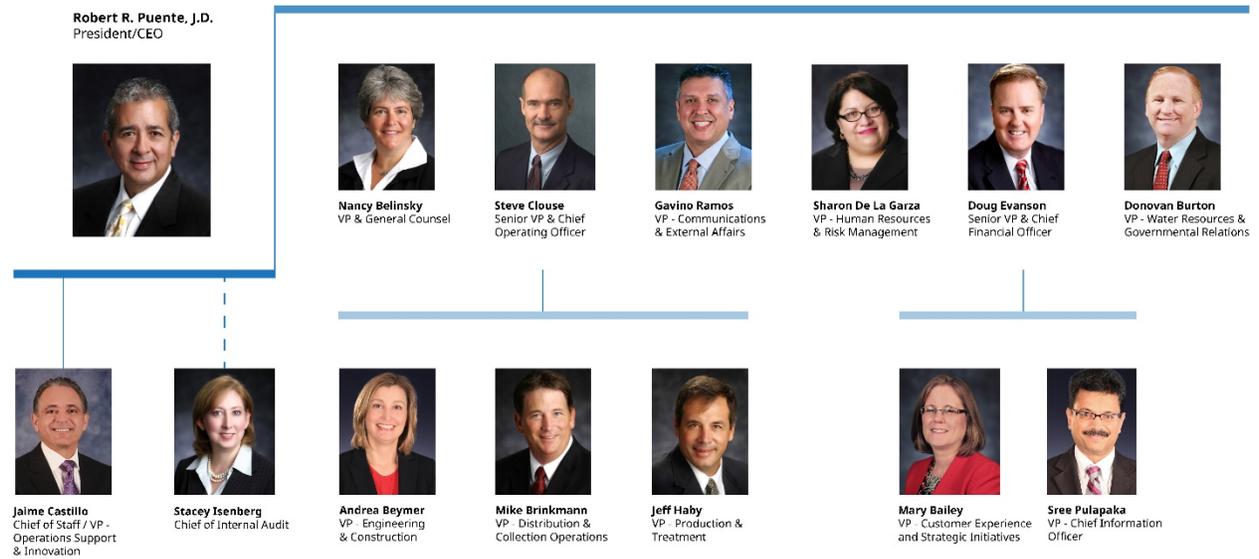
Mayor Ron Nirenberg
ex Officio

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SAN ANTONIO WATER SYSTEM ORGANIZATION CHART



EXECUTIVE MANAGEMENT



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MISSION – VISION - VALUES

The mission and vision statements, combined with SAWS' intrinsic core values, provide the compass which serves to guide the activities, goals and objectives of SAWS leadership team and workforce.

SAWS' mission of sustainable, affordable water services defines its purpose in serving the ratepayers.

The vision statement – to be leaders in delivering responsible water services for life – along with the values of excellence, integrity and respect, make up SAWS' core philosophy, describing what we as an organization believe, where we stand today, and where we wish to be in the future.



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November 3, 2020

Ms. Jelynn LeBlanc Burley, Chairwoman
Mr. David McGee, Vice Chairman
Mr. Eduardo Parra, Secretary
Ms. Amy Hardberger, Assistant Secretary
Mr. Edward Belmares, Trustee
Ms. Leticia Ozuna, Trustee
Honorable Ron Nirenberg, Mayor

Honorable Mayor and Trustees:

I am pleased to present the 2021 Annual Operating Budget and Capital Improvement Program of the San Antonio Water System (SAWS), which has been prepared in accordance with the requirements of San Antonio City Ordinance No. 75686 (the Ordinance). Specifically, the Ordinance states that "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 funds flow requirements of this ordinance."

Some of the key objectives of the 2021 budget are to:

- Sustain the delivery of affordable water and wastewater services in 2021 without any increases in rates as the community moves beyond the COVID-19 pandemic into recovery
- Provide for a full year of water delivery from the Vista Ridge Pipeline Project
- Maintain infrastructure to ensure reliability of service and compliance with regulatory requirements
- Continue to implement technological advancements in order to increase productivity, enhance customer interactions and safeguard SAWS' assets
- Ensure employee pay and benefits remain fair and competitive while retirement obligations are adequately funded
- Balance the need for strong financial metrics and the maintenance of credit ratings with the affordability of our services

The 2021 budget balances revenue requirements for the fiscal year ending December 31, 2021 with available revenues and other funding sources. Highlights of the 2021 budget include:

- Assumes 2021 billed water usage of 65.1 billion gallons, which is 1.2% less than the 2020 budgeted water usage. This reduction reflects a continuation of the decline in commercial and industrial class usage, which has taken place since the onset of COVID-19.
- Assumes water and wastewater customer growth of approximately 1.50%
- Includes estimated total Sources of Funds of \$909.4 million, which is \$19.8 million or 2.1% less than the 2020 Sources of Funds and comprised of:
 - Operating revenues totaling \$800.8 million
 - Non-Operating revenues totaling \$8.5 million
 - Capital recovery fees of \$100.1 million

- Provides for funding of \$454 million in operations and maintenance costs, reflecting an increase of \$18.0 million or 4.1% when compared to the 2020 Budget. This increase in O&M costs is attributable to the provision of the additional funds necessary to support the first full year of water delivery from the Vista Ridge Pipeline Project in 2021. Consistent with the funds flow requirements of the Ordinance as well as 2020 budget treatment, the entirety of the water payment associated with this water supply project has been budgeted as an operating and maintenance expense.
- Assumes funding for \$541.3 million in capital improvement projects
 - \$326.0 million in Wastewater projects
 - \$182.4 million in Water Delivery projects
 - \$32.8 million in Water Supply projects
 - \$0.1 million in Chilled Water projects
- Provides for \$9.8 million in capital outlay funding for vehicles, equipment and computer-related capital
- Provides for \$223.4 million in funding for debt service and expenses, which is \$12.5 million or 5.3% less than the 2020 budget for debt service and expenses
- Projects 1.6 times debt coverage on total bonded debt
- Includes a transfer of \$30.9 million to the City of San Antonio, continuing to reflect the 2019 increase in SAWS transfer payment to the City from 2.7% to 4.0% of gross revenues

The annual budget process is an effort to strike the appropriate balance between ensuring that rates remain affordable for SAWS customers and ensuring the ongoing operational and financial integrity of the organization. The 2021 Annual Operating Budget and Capital Improvement Program will allow the San Antonio Water System to continue providing high quality water, wastewater, recycled water and chilled water services at reasonable costs, while also maintaining a healthy financial position.

Respectfully submitted,



Douglas P. Evanson
Senior Vice President/Chief Financial Officer

BUDGET SUMMARY

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BUDGET SUMMARY

The 2021 Budget presents a comprehensive projection of San Antonio Water System (SAWS) operations from January 1, 2021 through December 31, 2021. This budget summary describes the key recommendations encompassing the 2021 Budget.

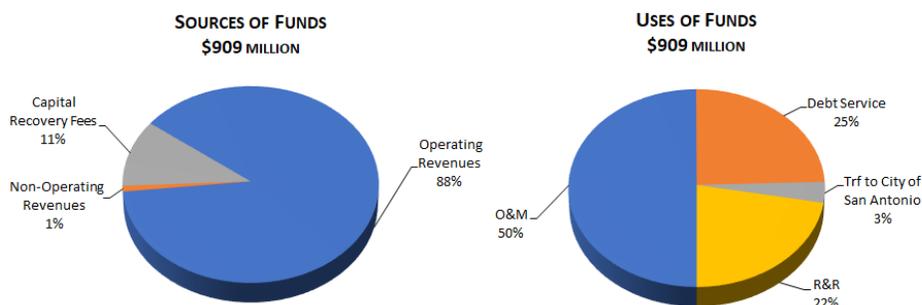
The COVID-19 pandemic profoundly disrupted economic activity and reduced employment across the world, the nation and in San Antonio. Significant economic hardships have been imposed upon our customers as job layoffs and eliminations occurred throughout the community. Consequently, with the changes in local economic activity during 2020 there have been significant changes in water consumption patterns, specifically in our commercial customers' usage. Nevertheless, in order to mitigate further adverse economic impact on the community, the goal of the 2021 Budget is to continue to provide for delivery of affordable water and wastewater services in 2021 without the need for an increase in water and sewer rates as the community moves beyond the COVID-19 pandemic into recovery.

A summary of the 2021 revenue requirements, as well as the sources of funding to meet the requirements are provided in the table below.

	<i>\$ in Millions</i>			
	2020 Budget	2021 Budget	Change	% Change
Sources of Funds				
Operating Revenues	\$ 807.1	\$ 800.8	\$ (6.3)	-0.8%
Non-Operating Revenues	22.0	8.5	(13.5)	-61.4%
Capital Recovery Fees	100.1	100.1	-	0.0%
Total	\$ 929.2	\$ 909.4	\$ (19.8)	-2.1%
Uses of Funds				
Operations and Maintenance	\$ 436.0	\$ 454.0	\$ 18.0	4.1%
Debt Service and Expenses	235.9	223.4	(12.5)	-5.3%
Transfer to City of San Antonio	31.7	30.9	(0.8)	-2.5%
Available for Renewal and Replacement - Restricted	108.1	102.8	(5.3)	-4.9%
Available for Renewal and Replacement -Unrestricted	117.5	98.3	(19.2)	-16.3%
Total	\$ 929.2	\$ 909.4	\$ (19.8)	-2.1%

The 2021 budget presents a financial plan designed to continue SAWS' mission to provide sustainable affordable water services. The budget balances revenue requirements with available revenues and other funding sources. Some of the key objectives of the plan are:

- Continued compliance with the requirements of the Consent Decree entered into with the United States Environmental Protection Agency and Texas Commission on Environmental Quality relating to the reduction of sanitary sewer overflows (SSOs),
- Sustained investment in Water Supply initiatives in support of the 2017 Water Management Plan to include a full year of the operation of the Vista Ridge Pipeline Project and
- Continued repair and replacement of aging infrastructure as well as a continuation in the expansion of our infrastructure to serve San Antonio's growing population.



OPERATIONS AND MAINTENANCE (O&M) BUDGET HIGHLIGHTS

The 2021 O&M budget totals \$454 million. This is an increase of \$18.0 million, or 4.1% compared to \$436.0 million in 2020. The table below summarizes the primary drivers for the change in the O&M budget from 2020 to 2021.

Changes to O&M Budget (\$ in millions)	
2020 O&M Budget	\$436.0
Added Cost of Full Year of Vista Ridge Water and O&M Payments	\$ 24.0
Added Cost of Full Year of Vista Ridge Utilities	2.2
Increased Software & Hardware Maintenance Costs	1.3
Increased Chemical & Material Costs	1.2
Additions Subtotal	\$ 28.7
Reduction of Distribution & Collection Contractual Services	(5.6)
Reduction of Water Resources Contractual Services	(1.3)
Other Reductions (Individually ≤ \$1 Million)	(3.8)
Reductions Subtotal	\$ (10.7)
Net Increase in O&M	\$ 18.0
2021 O&M Budget	\$454.0

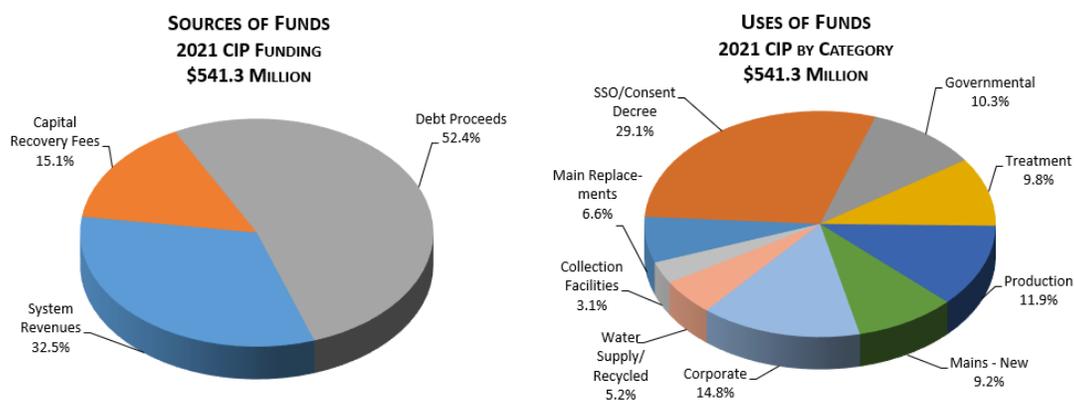
The most significant change in the budget over 2020 is the provision of the additional funds necessary to support the first full year of water delivery from the Vista Ridge Pipeline Project in 2021. Specifically, to sustain operations for a full year, a total of \$26.2 million has been added to make contractually required payments for water transmitted via the Vista Ridge Pipeline, to provide for the operation and maintenance of the pipeline, to support the operation of the new Agua Vista Station, which receives and treats Vista Ridge water for transmission into the SAWS distribution system and to provide for the utility expenses associated with the pipeline and the Agua Vista Station. To help offset the additional costs, a number of reductions were identified.

CAPITAL IMPROVEMENT PROGRAM (CIP) HIGHLIGHTS

The projected 2021 Capital Improvement Program (CIP) totals \$541.3 million. The planned projects include:

- Improvements necessary to comply with the federal Consent Decree requiring major capital improvements to address SSOs,
- Improvements to water production and wastewater treatment facilities,
- Water and sewer main replacements and relocations that support City of San Antonio, Bexar County, and Texas Department of Transportation (TXDOT) street, highway and drainage improvements,
- Repair and replacement of other deteriorating water mains,
- New water and sewer mains in support of growth within SAWS service area and
- Construction of the new Northeast Operations Center, which is Phase 3 of the Service Center Project. The new facility will include new administration, fleet and supply buildings, fueling islands, parking and materials storage areas.

The 2021 budget assumes approximately 47.6% of the funds necessary to complete the 2021 CIP will be provided by existing renewal and replacement funds, capital recovery fees and investment income with the remaining funds to be provided by the issuance of additional debt. While it is anticipated that the expenditure of this level of cash reserves will result in some minor weakening of SAWS' current liquidity position, it is intended to reduce additional debt issuances, thereby minimizing the need for current and future rate adjustments.



FIVE-YEAR CIP PROJECTION BY CATEGORY

Over the next five years, SAWS expects to invest \$2.58 billion in capital improvements, the majority of which will be focused on improvements to our wastewater system in support of our obligations under the federal Consent Decree. In addition, the implementation of SAWS Advanced Meter Infrastructure (AMI) initiative – ConnectH2O is planned to begin deployment in 2022 with complete installation projected to take approximately five years.

Core Business/ Category (\$ in millions)	2021	2022	2023	2024	2025	Total 2021-2025
Water Delivery						
Corporate	\$ 17.1	\$ 95.1	\$ 2.8	\$ 2.9	\$ 2.9	\$ 120.8
Governmental	27.8	26.4	27.2	27.9	28.7	138.0
Mains - New	26.7	18.7	91.1	66.2	65.0	267.7
Main Replacements	35.6	26.1	26.6	77.2	104.4	269.9
Production	64.4	35.1	50.2	43.5	28.8	222.0
Overhead	10.8	10.8	10.8	10.8	10.8	54.0
Water Delivery Total	182.4	212.2	208.7	228.5	240.6	1,072.4
Wastewater						
Corporate	32.1	18.2	18.3	18.8	19.3	106.7
Governmental	27.8	26.4	27.2	27.9	28.7	138.0
Mains - New	23.3	4.2	4.4	4.5	7.4	43.8
Main Replacements	157.8	80.7	135.0	140.2	67.8	581.5
Collection Facilities	17.0	-	-	1.2	5.1	23.3
Treatment	53.2	79.7	84.2	46.6	15.0	278.7
Overhead	14.8	14.8	14.8	14.8	14.8	74.0
Wastewater Total	326.0	224.0	283.9	254.0	158.1	1,246.0
Water Resources						
Corporate	2.3	94.4	2.5	2.5	2.6	104.3
Desalination	-	-	9.8	4.4	7.1	21.3
Aquifer Storage & Recovery	25.4	23.0	4.6	16.3	5.8	75.1
Overhead	3.0	3.0	3.0	3.0	3.0	15.0
Water Resources Total	30.7	120.4	19.9	26.2	18.5	215.7
Recycled Water	2.1	17.3	6.8	7.0	9.2	42.4
Chilled Water	0.1	0.1	0.1	0.1	0.1	0.5
Grand Total	\$ 541.3	\$ 574.0	\$ 519.4	\$ 515.8	\$ 426.5	\$ 2,577.0

IMPACT ON RATES

In order to further mitigate any adverse economic impacts from the COVID-19 pandemic on our customers, the goal of the 2021 Budget is to continue full delivery of water and wastewater services without the need for an increase in water, sewer or recycled water rates.

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STRATEGIC GOALS AND OBJECTIVES

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STRATEGIC GOALS AND OBJECTIVES

OVERVIEW

In 2019, SAWS undertook an initiative to track its strategic goals through a tiered metric program. This initiative identified the following six strategic focus areas or “Tier 1 Metrics” which serve as the foundation for all of SAWS’ activities each and every year.



In addition to these overarching and enduring strategic focus areas, the process also identified three currently ongoing “Key Initiatives”, which require successful execution as they ultimately will shape the long-term future of SAWS. These 3 key initiatives are as follows:



For each of the six Tier 1 Metrics as well as the three Key Initiatives, strategic objectives were identified, and strategic measures were developed to assist in the evaluation of the degree to which the objectives were achieved. A summary of the combined Tier 1 Metrics and Key Initiatives with the accompanying strategic objectives and the department within SAWS responsible for achieving the objective is summarized below:

Tier 1 Metrics	Strategic Objectives	Responsible Departments
Community Accountability	Regulatory Compliance	Production & Treatment / Water Resources
	Reputation Management	Communications and External Affairs
Customer Service	Customer Satisfaction - Residential	Customer Experience and Strategic Initiatives
Employee Engagement	Employee Engagement	Human Resources
	Total Recordable Incident Rate (TRIR)	Human Resources
Financial Efficiency and Affordability	Senior Lien Bond Ratings	Financial Services
	Service Affordability	Financial Services
Operational Excellence	Wastewater Control	Sanitary Sewer Improvements
	Water Quality and Reliability	Water Resources
Water Stewardship	Gallons per Capita per Day	Water Resources

Key Initiative	Strategic Objectives	Responsible Department
Consent Decree Adherence	Meet all requirements of the Consent Decree	Sanitary Sewer Improvements
Tiered Metric and Balanced Scorecard Implementation	Implement Balanced Scorecard for Tier 1 and Tier 2 Metrics	All Departments
Vista Ridge Implementation	Reach substantial completion for the integration project	Engineering & Construction / Water Resources

VALIDATION PROCESS

In order to validate the achievement of the specific objectives, data gathering sessions were conducted to better understand the calculation sources, systems and processes as well as to review the documentation confirming the outcomes and the communication of these activities.

GOALS OF VALIDATION

The validation effort had four goals:

- Validate the calculations were accurate, sound and reasonable;
- Validate the data in the system of record was verified, confirmed and reliable;
- Validate the data flow is traceable and documented; and
- Validate the final result is communicated and approved.

CONCLUSION & FUTURE ROADMAP

Results of the validation process were documented on a SAWS strategic scorecard and were ultimately reported to the SAWS Board of Trustees. Any processes that did not meet the threshold or were not able to be validated will be addressed and closely monitored. The program will continue to develop and evolve in the coming years. Next steps include periodic monitoring of the Tier 1 Metrics and Key Initiatives in addition to establishing detailed Tier 2 Metrics at each department level to ensure alignment with SAWS' overall strategic goals and objectives.

COMMUNITY PROFILE

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COMMUNITY PROFILE



Beyond its role as a significant population and business center within the state of Texas, San Antonio possesses a deep history that dates back to the 1700's. In 1718, Spanish monks built a mission named San Antonio de Valero on the site of a Coahuiltecan Indian village. Eventually, this mission would be named the Alamo, where Texan forces fought Mexican soldiers to the death during the Texas revolution. Following the revolution, Texas was annexed into the United States and San Antonio served as a place of cultural convergence that has shaped it into the city that it is today.

LOCATION

San Antonio, the county seat of Bexar County (pronounced "bear"), is located in south central Texas. The city encompasses a total geographic area of 486 square miles and is:

- 80 miles south of Austin (state Capitol)
- 280 miles south of Dallas
- 200 miles west of Houston
- 140 miles northwest of the Gulf of Mexico
- 150 miles northeast of the city of Laredo on the Mexican border

CLIMATE

With its location on the northwest edge of Texas' Gulf Coastal Plain, San Antonio experiences a modified subtropical climate. Average temperatures range from 50 degrees in January to the mid-90s in July and August. While the summer is hot, with daily temperatures above 90 degrees over 80% of the time, San Antonio only experiences an average of eight days over 100 degrees a year. Mild weather prevails during the winter months, with daily low temperatures below freezing occurring on average about 20 days per year. Average yearly rainfall is approximately 32 inches, with the extremes ranging from 10.11 inches in 1917 to 52.28 inches in 1973.



POPULATION

According to 2019 estimates by the U.S. Census Bureau, the City of San Antonio is the seventh most populous city in the United States and the second most populous city in Texas. From 2018 to 2019, the City of San Antonio had the second largest numeric population growth of any of the top 10 cities in terms of population in the United States with an increase of 17,237 new residents. The San Antonio-New Braunfels Metropolitan Statistical Area (MSA) includes Atascosa, Bandera, Bexar, Comal, Guadalupe, Kendall, Medina, and Wilson counties and was estimated to contain 2.55 million people in 2019. The San Antonio-New Braunfels MSA ranks twenty-fourth among national MSAs and third among those in Texas.

The following table provides the population of the City of San Antonio, 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
2019 (Estimated)	1,547,253	2,003,554	2,550,960
2010	1,327,407	1,714,773	2,142,508
2000	1,144,646	1,392,931	1,711,703
1990	935,933	1,185,394	1,407,745
1980	785,880	988,800	1,154,648
1970	654,153	830,460	951,876
1960	587,718	687,151	796,792
1950	408,442	500,460	603,775
1940	253,854	338,176	437,854
1930	231,542	292,533	389,445
1920	161,379	202,096	289,089

Beginning in 2000, the number of counties in the MSA was increased from four to eight: Atascosa, Bandera, Kendall and Medina counties were added to Bexar, Comal, Guadalupe and Wilson counties.

Source: U.S. Census Bureau

EDUCATION

Within 50 miles of San Antonio, 15 colleges and universities offer degrees in all major fields of study and educate over 163,000 students.

Institution	Certified Fall 2018	Preliminary Fall 2019	Change	Percent Change
Texas State University	38,644	38,231	(413)	-1.07%
University of Texas at San Antonio	32,101	32,593	492	1.53%
San Antonio College	17,573	16,538	(1,035)	-5.89%
Northwest Vista College	16,293	16,699	406	2.49%
St. Philip's College	11,590	11,884	294	2.54%
Palo Alto College	9,852	9,876	24	0.24%
University of the Incarnate Word	7,829	7,471	(358)	-4.57%
Texas A&M University-San Antonio	6,616	6,773	157	2.37%
Northeast Lakeview College	5,510	6,220	710	12.89%
St. Mary's University	3,617	3,514	(103)	-2.85%
Wayland Baptist University	3,208	2,988	(220)	-6.86%
Univ. of Tex. Health Science Ctr. at San Antonio	3,280	3,410	130	3.96%
Our Lady of the Lake University	3,149	2,960	(189)	-6.00%
Trinity University	2,635	2,692	57	2.16%
Texas Lutheran University	1,439	1,476	37	2.57%
Total	163,336	163,325	(11)	-0.01%

Source: Texas Higher Education Coordinating Board

ECONOMY

The COVID-19 pandemic profoundly disrupted economic activity and reduced employment in the world, the nation and in the San Antonio area. Significant economic hardships have been imposed upon our customers as job layoffs and eliminations occurred throughout the community.

For the nation as a whole, in an August 2020 update to its second quarter economic activity estimate, the U.S. Bureau of Economic Analysis (BEA) reported real gross domestic product (GDP) declined at an annual rate of 31.7%. In the first three months of 2020, real GDP declined by 5.0%. In its September 2020 U.S. base case economic forecast, the Conference Board projects a third quarter GDP increase of 32.9% with momentum from improved economic activity during the summer. Fourth quarter GDP growth is expected to be much slower (1.3%) as consumer spending slows due to continuing high unemployment. Overall, the Conference Board estimates an annual -3.8% growth rate for 2020 with a modest 3.2% growth recovery projected in 2021.

Locally, the economy in the San Antonio Metropolitan Statistical Area (MSA) has been adversely impacted by the COVID-19 pandemic. Overall, as of August 2020, total non-farm employment in the MSA has declined 6.1% since December 2019 – from 1.1 million to 1.03 million jobs. The MSA unemployment rate in July 2020 was 7.9% compared to just 2.8% as of December 2019. Nevertheless, San Antonio boasts a favorable business environment that supports economic diversification and growth, which will facilitate the local economy's recovery. This diversification can be seen by the large variety of industries that have major operations in the city, including aerospace, bioscience/healthcare, environmental/green technology, financial services, information technology/cyber security and manufacturing industries along with military/defense. All of these industries are supported by the city's commitment to strengthen infrastructure improvements and to invest in a growing and dedicated workforce.



The San Antonio Economic Development Foundation (SAEDF), a private, nonprofit organization that assists businesses relocating or expanding into the San Antonio area, the Greater San Antonio Chamber of Commerce, the Texas Comptroller of Public Accounts and the U.S. Bureau of Labor Statistics are the sources of the following information on local industry.

AEROSPACE/AVIATION

The local aerospace industry includes a range of businesses that manufacture aircraft equipment and parts, service and repair aircraft, produce and distribute air transportation equipment and supplies, provide both scheduled and unscheduled air transportation, and operate flight schools. Most of the 8,800 jobs (as of the end of 2019 according to SAEDF) provided by this industry are concentrated at the San Antonio International Airport and Port San Antonio, which occupies the facilities formerly operated by the U.S. Air Force as Kelly Air Force Base.

BIOSCIENCE/HEALTHCARE

As one of San Antonio's leading industries, the healthcare and bioscience industry has shown steady growth and innovation over the past two decades. The industry is composed of health services and related industries, such as research, pharmaceuticals and medical device manufacturing. In the Hospitals and Ambulatory Health Care Services employment subsectors, there are over 101,300 jobs in the local area as of the end of August 2020. Despite a 1.3% employment reduction for the first eight months of 2020, overall employment in these subsectors has increased by over 23% since the end of 2011.

FINANCIAL SERVICES

The Financial Services industry in San Antonio includes the following sectors: banking and credit; investment activities; insurance; funds, trusts and other financial vehicles; accounting and bookkeeping. San Antonio's financial sector employed more than 91,800 people as of the end of August 2020. While there has been a 4.3%

employment reduction for the first eight months of 2020, overall employment in the sector has increased by over 27.7% since the end of 2011.

INFORMATION TECHNOLOGY/CYBER SECURITY

The Information Technology/Cyber Security industry plays a stable employment role in San Antonio. Since the end of 2011, the number of local jobs in the industry has ranged from 19,700 in 2011 and 19,900 as of December 2019, with a high of 21,800 in 2014. As of August 2020, the sector had 19,000 jobs reflecting a 4.5% decline since December 2019. According to SAEDF, the local information products sector includes computer and related component manufacturers, and Internet/software publishing. Information service companies include computer programming and internet service providers, web hosting firms, information technology trainers and equipment repair services. The services companies now provide nearly 80% of the industry's jobs and a majority of its economic impact.

MANUFACTURING

San Antonio has a large diverse manufacturing industry, with representation from every major sector of U.S. manufacturing present in the community, including materials and electricity, equipment and metal, transportation and diversified products. This sector employs 50,300 people in the San Antonio area as of August 2020. While there has been a 5.3% decline in employment since December 2019, the sector has grown by 8.2% overall since 2011.

MILITARY/DEFENSE

The U.S. military has had a significant and historic presence in San Antonio dating back well into the 19th century. The military mainly operates in San Antonio today under the framework known as Joint Base San Antonio (JBSA). JBSA has a substantial impact on the local economy in San Antonio and in Texas. According to the Texas Comptroller, in 2019, JBSA contributed at least \$41.3 billion to the Texas economy. In 2019, JBSA directly employed over 73,700 persons, directly and indirectly provided jobs for almost 211,000 persons, and generated an annual disposable personal income of approximately \$13 billion. The MSA's direct military employment accounted for 6.7% of the area's total non-farm employment in 2019.

EMPLOYMENT

While the number of jobs in the MSA has declined as a result of the COVID-19 pandemic in 2020, prior to 2020, the San Antonio economy had experienced robust, sustained growth since 2011 and, consequently, is well positioned to resume that growth once the pandemic abates. The pre-2020 economic growth coupled with the net immigration trends experienced in many areas of Texas resulted in local population growth that exceeded national averages. The annual average rate of non-farm job growth from 2011 to 2019 in the San Antonio MSA (2.73%) exceeded that of the nation (1.6%). The diversity of the San Antonio economy has provided a measure of stability through up and down economic cycles. Specifically, San Antonio's strategic positions in key employment sectors including government and military, biomedical sciences, medical services, tourism, and hospitality contribute to this stability. San Antonio's modestly favorable economic position relative to the nation is also reflected in the fact that, according to the U.S. Bureau of Labor Statistics, as of July 2020, the San Antonio MSA unemployment rate was 7.9%, while the nation's was 10.2%.

SAN ANTONIO WATER SYSTEM PROFILE

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SAN ANTONIO WATER SYSTEM PROFILE

HISTORY

SAWS was created in 1992 through the consolidation of three predecessor agencies: the City Water Board (the previous city-owned Water Supply utility); the City of San Antonio Wastewater Department (a department of the city government responsible for sewage collection and treatment); and the Alamo Water Conservation and Reuse District (an independent city agency created to develop a system for reuse of the city's treated wastewater). In addition, the Water Resources planning staff of the City Planning Department was realigned to the new agency to provide combined water related services for the San Antonio area.



On January 1, 2017, SAWS completed all legally required steps to fully integrate the operations and customers of the former Bexar Metropolitan Water District (BexarMet) with SAWS. This final step of full integration included the application of consistent rates for both existing SAWS and former BexarMet customers.

GOVERNANCE

San Antonio Water System is a public utility owned by the City of San Antonio. Complete management and control of SAWS is vested in a Board of Trustees consisting of the mayor and six members who are appointed by the San Antonio City Council and serve staggered four-year terms. The mayor of San Antonio serves as an ex-officio voting member. The general operations of the utility are under the supervision of the President/Chief Executive Officer.

SERVICE AREA

WATER DELIVERY AND WASTEWATER

SAWS' water delivery service area currently extends over approximately 930 square miles, making it the largest water purveyor in Bexar County. The service area includes most of Bexar County, several suburban municipalities and parts of adjacent counties. In addition to serving its own retail customers, SAWS also provides wholesale water to a few smaller utility systems within this area.

SAWS provides potable water service to residential, commercial, multifamily, industrial and wholesale accounts. As of August 31, 2020, the water delivery system provides potable water service to 524,370 customer connections.

The water delivery system currently utilizes 117 elevated and ground storage tanks with a combined storage capacity of 294.4 million gallons. The system also includes the water treatment plant operating at the Agua Vista Station which receives, treats and transmits water received from the Vista Ridge Pipeline Project. As of August 31, 2020, SAWS had installed 7,347 miles of water lines, ranging in size from 1 inch to 96 inches in diameter and 43,011 fire hydrants were in service.

A somewhat different area, following natural watersheds, is defined for wastewater collection and treatment. SAWS is the largest wastewater treatment agency in the San Antonio area. SAWS also provides collection and treatment services by contract to developments outside its defined service area to avoid unnecessary proliferation of state wastewater discharge permits. The wastewater system has certain prescribed boundaries that currently cover an area of approximately 854 square miles. As of August 31, 2020, SAWS provided wastewater services to 469,091 customer connections, including 12 wholesale sewer connections.

Also, as of August 31, 2020, the wastewater system is composed of 5,668 miles of mains and three major treatment plants: Steven M. Clouse Water Recycling Center (formerly called Dos Rios), Leon Creek Water Recycling Center and Medio Creek Water Recycling Center.

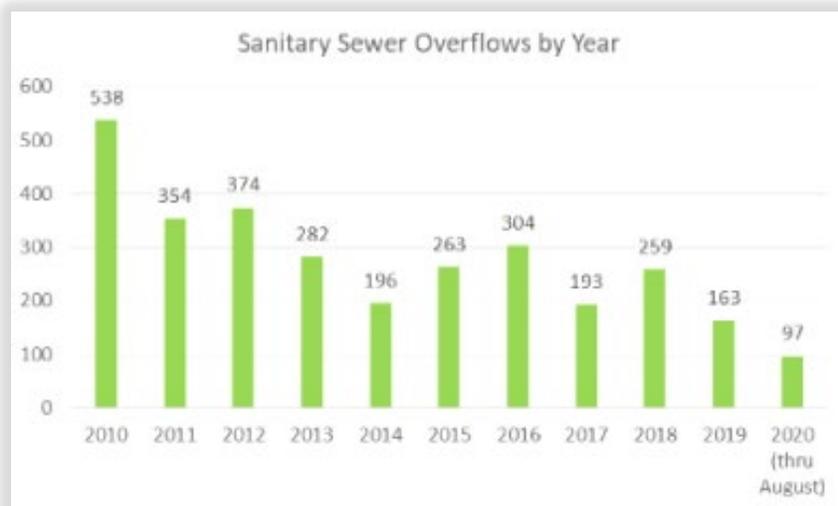
CHILLED WATER SYSTEM

SAWS owns, operates and maintains four thermal energy facilities providing chilled water services to governmental and private entities. Two of the facilities, located in the City of San Antonio’s downtown area, provide chilled water to twenty-one customers. They include various City of San Antonio facilities such as the Henry B. Gonzalez Convention Center and the Alamodome, which constitute a large percentage of the downtown system’s 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. The other 2 thermal facilities, owned and operated by SAWS, are located at the Port San Antonio industrial area and provide chilled water to 5 large industrial customers.



SEWER MANAGEMENT

In June 2013, SAWS approved a settlement with the U.S. Environmental Protection Agency (EPA) that requires additional work over 10 to 12 years to reduce sanitary sewer overflows (SSOs). The work required to comply with the consent decree includes system-wide inspection, cleaning and evaluation of sanitary sewer pipelines. Additionally, increased investment in the replacement and rehabilitation of aging sewer infrastructure is necessary. The targeted replacement and rehabilitation program has been specifically tailored based on extensive condition assessments. SAWS has significantly reduced the number of SSOs as result of efforts made since 2010 to clean and replace sewer pipelines. The following chart shows the number of SSOs since 2010. In 2019, 163 SSOs were experienced which is a record low number.



The 2021 O&M budget includes \$27.6 million in operating costs related to program management, televising and cleaning sewer mains, capacity assessment activities, and repair of sewer infrastructure. Additionally, \$157.8 million in capital project investments are planned in 2021 to rehabilitate aging sewer infrastructure and address system capacity issues.

The SSO program has met the requirements of the consent decree since its 2013 inception. Completion of all consent decree requirements is expected to occur by 2025 as originally required. The most costly and complex SSO pipeline project is the W-6 Upper Segment – Highway 90 to Southwest Military project. This project will route over five miles of wastewater lines around Lackland AFB with 104-inch gravity mains at depths of up to 140 feet. A contract for construction was approved by SAWS Board of Trustees in July 2020. The cost of construction is \$167 million. To meet the consent decree deadline, the project must be completed by July 2025. Because of possible easement acquisition challenges related to the pipeline, it is expected that the federal government will favorably consider a limited deadline waiver request. SAWS will continue implementing best practices after the consent decree requirements are met to ensure proper management of the sewer system going forward.

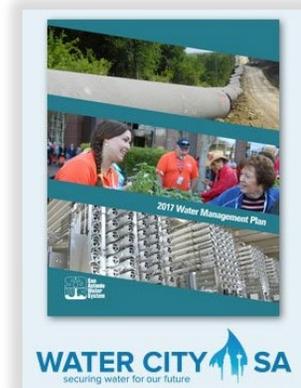
The focus of the SSO program continues to shift from condition and capacity assessments to design and construction of SSO reduction projects. Consequently, fewer budgeted full time equivalent (FTE) positions will be required for SSO program planning efforts. To account for this shift, seven of the SSO planning positions have been transferred to meet other operational needs, reducing the SSO FTEs from 37 in the 2020 budget to 30 in the 2021 budget.

WATER SUPPLY

Historically, San Antonio obtained nearly all of its water from the Edwards Aquifer. In 1993, the Texas Legislature created the Edwards Aquifer Authority (EAA) as a conservation and reclamation district. The EAA has broad powers to manage, conserve, preserve and protect the Edwards Aquifer. These powers include increasing the recharge of and limiting withdrawals from the Edwards Aquifer through a permitting system that ensures continuous minimum spring flows of the Comal Springs (in New Braunfels) and the San Marcos Springs to protect endangered and threatened species.

In 1996, the City Council appointed a 34-member Citizens Committee to develop strategic policies and goals for water resource management. 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 City Council, becoming the foundation for SAWS’ 1998 *Water Resource Plan*. In November 1998, the City Council accepted the 1998 *Water Resource Plan* “Securing our Water Future Together” as the first comprehensive, widely supported water resource plan for San Antonio. The 1998 *Water Resource Plan* established programs for immediate implementation, as well as a process for developing long-term water supplies. In October 2000, the City Council created a permanent funding mechanism, the Water Supply Fee, for water resources development and water quality protection.

The 1998 *Water Resource Plan* has been updated periodically. The 2017 *Water Management Plan* is the current version of SAWS long range planning efforts. The 2017 *Water Management Plan* charts the path that SAWS plans to pursue to meet the long-term needs of current and future San Antonio residents through 2070 – even during periods of extreme drought.



CURRENT SOURCES OF WATER SUPPLY

The table below provides a summary of the budgeted sources of water supply under non-drought conditions for SAWS:

Available Sources of Water Supply for 2021 Under Non-Drought Conditions	
Source	Acre-Feet
Edwards Aquifer	269,666
Recycled Water (CPS Energy Power Plants)	50,000
Vista Ridge	50,000
Recycled Water (Direct Customers)	25,000
Trinity Aquifer	12,156
Regional Carrizo	11,533
Brackish Groundwater Desalination	11,200
Local Carrizo	9,900
Canyon Lake	8,000
Canyon Regional Water Authority	5,300
Medina Surface Water	-
Total	452,755

EDWARDS AQUIFER

The largest amount of SAWS water holdings is Edwards Aquifer permitted groundwater withdrawal rights. In 2021, SAWS has budgeted for a total inventory of 269,666 acre-feet per year of EAA-permitted groundwater withdrawal rights. Access to these permitted groundwater withdrawal rights is subject to varying levels of availability (cutbacks) depending on a management system using water levels at key index wells and spring flows. These cutbacks may range from 0% to 44% in any given year.

The following table shows annual average cutbacks for the last five years.

Year	EAA Cutback	J-17 Index Well Annual Average Levels
2015	19.71%	652.9
2016	0.00%	672.3
2017	3.40%	670.4
2018	8.68%	657.5
2019	0.00%	683.4
2020	2.96%	666.4*

* Year to date average as of August 31, 2020

On August 31, 2020, the actual level of J-17 Index Well was 655.5. The EAA initiated Stage I of Critical Period Cutbacks on July 9, 2020.

Through SAWS' Aquifer Storage and Recovery facility (ASR), SAWS is able to store Edwards Aquifer water in a portion of the Carrizo Aquifer located in southern Bexar County. This water can be recovered during periods of drought in order to augment SAWS' available water supplies to meet customer demands. As of August 31, 2020, 179,742 acre-feet of Edwards Aquifer water is currently stored in the ASR.

In connection with the EAA's directive by the Texas Legislature to ensure that continuous minimum spring flows of the Comal Springs and the San Marcos Springs are maintained to protect endangered and threatened species, the Edwards Aquifer Recovery Implementation Program (EARIP) was established in 2007. The EARIP was developed through a consensus-based process that involved input from the U.S. Fish and Wildlife Service (USFWS), other

appropriate federal agencies, and all interested stakeholders in the Edwards region. Together, these entities over a four-year period developed and approved a springflow protection and habitat restoration plan, the Edwards Aquifer Habitat Conservation Plan (EAHCP).

The primary parties to the EAHCP include the EAA, SAWS, the City of New Braunfels, the City of San Marcos and Texas State University. The EAHCP was used by the USFWS as the basis for issuing an Incidental Take Permit (ITP) which will protect San Antonio and the region from the threat of future environmental lawsuits and federal control of the aquifer over a 15-year term. This ITP was issued by the USFWS on March 18, 2013.

A major component of the EAHCP includes the use of the SAWS ASR facility in conjunction with other measures to contribute to modeled spring flow protections during severe droughts. After the approval of the EAHCP, SAWS and the EAA entered into an Interlocal Contract in August 2013 that details the implementation of the ASR strategy contributing to springflow protection. The EAA itself, or by use of an agent, acquires Edwards Aquifer groundwater withdrawal rights which are conveyed to SAWS for storage at ASR. An amount commensurate to the water conveyed on behalf of the region will be forborne from SAWS Edwards Aquifer production when specified triggers during a drought similar to Texas' drought of record are met. The contract, and amount of water leased by the EAA and conveyed to SAWS to store, limits the forbearance SAWS is obligated to perform over the term of the ITP. SAWS is reimbursed by the EAA for the incremental cost of storing EAHCP water in ASR and withdrawing that water during drought of record conditions to cover its forbearance requirements under the agreement.

RECYCLED WATER

The San Antonio Water System has the largest recycled water system in the United States and is permitted to sell Type I (high quality) recycled water from its water recycling centers (formerly known as wastewater treatment plants). The water recycling program is designed to provide up to 25,000 acre-feet per year of recycled water to commercial and industrial businesses in the City. This water recycling system was originally comprised of two transmission lines, running north and south on the eastern and western sides of the city. In 2008, these two major transmission lines were interconnected at the northern end, providing additional flexibility to this valuable water resource. Currently, approximately 130 miles of pipeline deliver highly treated effluent to 140 customer connections. Recycled water is being delivered for industrial processes, cooling towers, irrigation of golf courses, landscapes 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 river and creek flows. The result has been significant and lasting environmental improvements for the aquatic ecosystems in these streams.

Under a recycled water supply contract, SAWS also provides up to 50,000 acre-feet of water to San Antonio's municipally owned electric and gas utility, CPS Energy. This water is discharged by San Antonio's three Water Recycling Centers and then flows to a downstream location on the San Antonio River where CPS Energy diverts the water into Braunig and Calaveras Lakes to provide cooling water for its nearby power plants.

REGIONAL CARRIZO

As part of diversifying SAWS' water portfolio, a regional partnership was entered into with Schertz-Seguin Local Government Corporation (SSLGC). The Regional Carrizo project is located in Gonzales County, approximately 50 miles from San Antonio. This project allows SAWS to utilize available capacity in an existing pipeline and water treatment plant owned and operated by SSLGC. In 2021, SAWS has budgeted for 11,533 acre-feet of water from the Regional Carrizo project, including the purchase of an additional 500 acre-feet of water from SSLGC.

BRACKISH GROUNDWATER DESALINATION

The Brackish Groundwater Desalination (BGD) plant produces brackish water from the Wilcox Aquifer in southern Bexar County and treats it to drinking water quality standards. The initial phase of the plant has the capacity to provide up to 11,200 acre-feet per year of drought-proof desalinated groundwater to San Antonio’s taps. Future phases are planned for the 2040 decade and will eventually bring the total supply from this program to 33,600 acre-feet per year. The desalination plant is located at the SAWS H₂Oaks Center in south Bexar County, where three sources of water are managed: Brackish Groundwater, Aquifer Storage and Recovery (ASR) and Local Carrizo. The Center provides research facilities for college/university students to help improve water technology and processes and offers educational tours to the public.



VISTA RIDGE – REGIONAL WATER SUPPLY



In October 2014, the City Council adopted an ordinance, approving the execution of a Water Transmission and Purchase Agreement (WTPA) between the City, acting by and through SAWS, and Vista Ridge LLC to provide up to 50,000 acre-feet of potable water per year for an initial period of 30 years. The Vista Ridge Pipeline Project represents a significant diversification of SAWS’ water sources as the water provided, if delivered at the maximum amount, will account for approximately 20% of the SAWS’ current annual usage.

In May 2016, SAWS exercised its contractual right to fix the Capital and Raw Groundwater Unit Price (CRGWUP) under the WTPA based on the methodology provided for therein. This action served to lock in the price of the water component of SAWS annual payment requirement at \$1,606 per acre foot for the entire 30-year term of the WTPA. The project achieved financial close in November 2016.

Vista Ridge LLC constructed 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 constructed a 142-mile pipeline from this well field to northern Bexar County. The pipeline was connected to the SAWS distribution system at the Agua Vista Station, the delivery point in northern Bexar County, to treat the Vista Ridge water. Construction was completed in early 2020.

Vista Ridge LLC began delivering water to SAWS on April 15, 2020. The start of water delivery initiated the 30-year operational phase, during which period SAWS is obligated to pay for water (up to 50,000 acre-feet annually) made available by Vista Ridge LLC. For 2020, a total of \$81.9 million was budgeted for the first eight and a half months of operations. For 2021, the first full year of operations, a total of \$108.8 million is budgeted for 50,000 acre-feet (approximately \$2,176 per acre foot). In addition to the \$80.3 million for contractually required water payments (based on the \$1,606 CRGWUP), SAWS will pay an estimated \$12.6 million in operations and maintenance costs, as a direct pass through under the WTPA, approximately \$10.2 million for utility expenses and approximately \$4.9M to support the Agua Vista Station operations.

Vista Ridge and Agua Vista Budgets				
\$ in Millions				
Facility	Expenditure	2020	2021	Difference
Vista Ridge Pipeline	Water Payment	\$ 61.03	\$ 80.30	\$ 19.27
	O&M Payment	7.77	12.55	4.78
	Staffing Cost	0.49	0.45	(0.04)
	Utilities Cost	7.95	10.18	2.23
	Other Costs	0.49	0.46	(0.03)
Subtotal		\$ 77.74	\$ 103.94	\$ 26.20
Agua Vista Station	Staffing Cost	\$ 0.77	\$ 0.91	\$ 0.14
	Utilities Cost	1.07	1.10	0.03
	Chemical Cost	1.47	2.05	0.58
	Other Costs	0.80	0.79	(0.01)
Subtotal		\$ 4.11	\$ 4.86	\$ 0.75
Totals		\$ 81.86	\$ 108.80	\$ 26.96

At the end of the 30-year operational phase, the well fields, pipeline and all related infrastructure will transfer to SAWS at no additional cost. Under an agreement with Blue Water Vista Ridge, LLC, the owner of the groundwater leases, SAWS will have the ability to continue production for an additional 30-year term, with the cost of the water at the end of the WTPA being tied to the costs of then-prevailing two-year Edwards Aquifer water leases.

CONSERVATION

The cost of developing and acquiring additional water supplies to meet the increased water demands of San Antonio’s projected future population is high. SAWS recognizes that efforts to promote conservation are a cost-efficient approach to minimizing the increase in demand for water caused by population growth. Beginning in 1994, SAWS implemented progressive water conservation programs aimed at reducing the number of gallons of water used. These programs target both indoor and outdoor residential, commercial and industrial uses. SAWS’ conservation efforts over time have had a dramatic impact on water usage per customer and helped to avoid the need to develop even more water supplies to support the city’s population growth over the last 20 years. Continued reductions in customer demand as a result of these programs is an important component of SAWS water planning efforts. The 2017 Water Management Plan assumes that conservation efforts will reduce customer demand from 117 gallons per capital per day (GPCD) to 88 GPCD by 2070.

INTEGRATION

Western Pipeline

The Western Pipeline was designed to provide the ability to integrate water produced from the various sources at the H₂Oaks Center and delivering that water to western Bexar County. Phase I of the pipeline was completed in 2016 and includes 28 miles of large capacity water transmission pipeline and new pump stations at the H₂Oaks facility and the Old Pearsall Pump Station. Phase II, which is included in the 2020 CIP, will extend the pipeline 17 miles to Anderson Pump Station at Hwy 151 and Loop 1604. This project is planned to be operational by 2022. With the addition of the Anderson Pump Station facility as a water integration point, the rated capacity of both phases of the pipeline will be up to 75 MGD.

Central Water Integration Pipeline

The Central Water Integration Pipeline (CWIP) was designed to facilitate the conditioning, conveyance and distribution of the Vista Ridge Water Supply throughout the SAWS water transmission and distribution system. This pipeline, along with the construction of the Agua Vista Station was completed in 2020. The Agua Vista Station includes the tanks to receive up to 50,000 acre-feet per year of water from the Vista Ridge Pipeline Project as well as the treatment plant to condition the received water for the seamless transition and distribution through SAWS pipelines. The completion of the CWIP project has a number of benefits, including the automation of many existing water distribution facilities; rehabilitation of existing facilities to improve system reliability; and elimination of outdated former BexarMet facilities that were in need of major renovations.

FINANCIAL POLICIES

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FINANCIAL POLICIES

BASIS OF ACCOUNTING

SAWS' financial statements 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 an enterprise 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 Statements of Net Position, revenues are recorded when earned and expenses are recorded at the time liabilities are incurred.

RECOGNITION OF REVENUES

Revenues are recognized as goods or services are provided. Customers' water 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 at the end of the year.

REVENUE AND EXPENSE CLASSIFICATION

Enterprise funds distinguish operating revenues and expenses from non-operating items. Operating revenues and expenses generally result from providing services in connection with an enterprise 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.

ANNUAL BUDGET

Approximately sixty days prior to the beginning of each fiscal year, SAWS presents to the SAWS Board of Trustees an annual budget prepared on an accrual basis to serve 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. The annual budget is also submitted to the City Council for review and consultation.

The annual budget should be a balanced budget that projects Gross Revenues sufficient to fund estimated financial requirements. The annual budget is prepared on a comprehensive basis and includes all water supply, water delivery, wastewater and chilled water operations as well as a capital improvement program. The Board of Trustees may subsequently modify its approved budget by giving notice thereof to the City.

The basis of budgeting used is the same as the basis of accounting, with the exception of budgeting for employee benefits, capital asset impairments and the Vista Ridge Pipeline Project. Contributions to employee retirement plans, both pension and post-retirement medical, are budgeted on a cash rather than accrual basis. Additionally, SAWS regularly provides for depreciation and amortization of its capital assets and periodically reviews such capital assets for possible impairment. Employee benefit expenses that do not require a current outlay of cash, depreciation and amortization and capital asset write-offs do not meet the definition of Operations and Maintenance Expense in accordance with Ordinance No. 76586, as they do not require current period expenditures of cash. The Vista Ridge Pipeline Project water payment, along with the related operations and maintenance and utility costs are budgeted entirely as Operations and Maintenance Expenses due to the fact that SAWS is only required to pay for water made available at the delivery point in north Bexar County. However, for accounting purposes, the infrastructure payment portion of the water payment will be treated as a financed purchase with the water lease portion being treated as an operating expense.

Encumbrances are not formally recorded in the accounting system, however, SAWS monitors and controls spending by utilizing budget variance reports for each accounting unit, which are periodically reviewed by the CFO and the Executive Management Team.

All funds are appropriated in the 2021 Operating Budget. Capital Improvement Program financial projections are not appropriated. Any amendments to the 2021 Operating Budget, which are expected to reduce the annual unrestricted transfer to the Renewal and Replacement Fund must be approved by the Board of Trustees.

CORE BUSINESSES

SAWS' operations are segregated into four core businesses as follows:

- Water Delivery – the functions of distributing water to the customer
- Water Supply – the functions related to the development and provision of additional water supply
- Wastewater – the functions of collecting and treating wastewater from the user customer
- Chilled Water – the functions related to providing chilled water service to specific customers of SAWS

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. A provision to increase the allowance for uncollectible accounts is recorded as an offset to operating revenue.

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.

RESTRICTED ASSETS

Assets restricted by City Ordinance (which incorporates the bond indentures) to pay current liabilities are reported as current assets in the Statements 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 Statements 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 and direct internal costs. As of 2020, however, interest expense during the construction period is no longer capitalized as part of the cost of capital assets. Included in capital assets are intangible assets, which consist of purchased water rights, 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 acceptance. 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. As discussed previously, SAWS does not specifically budget for depreciation and amortization.

CAPITAL CONTRIBUTIONS

Capital Contributions consist of plant contributions from developers, capital recovery fees, contributions in aid of construction and grant proceeds received from governmental agencies for facility expansion. Capital Contributions are recognized in the Statements 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 abates future capital recovery fees due from the developer equal to the acquisition value of the excess capacity of the infrastructure contributed. These abatements are conditional based on the type of development and in certain instances, time requirements and geographic restrictions.

Contributions in aid of construction are funds advanced by developers to SAWS for the construction of certain water, sewer or other assets for the benefit of the developer.

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 since 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 is 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.

RATES AND CHARGES

In accordance with City of San Antonio, Texas Ordinance No. 75686 requirements, SAWS must establish and maintain rates and charges to produce sufficient Gross Revenues in each fiscal year to:

- A. Pay Operations and Maintenance Expenses;
- B. Produce Pledged Revenues sufficient to pay:
 - 1) 1.25 times the senior lien annual debt service requirements and
 - 2) The amounts required to be deposited in any reserve fund created for the payment and security of senior lien obligations;
- C. Pay outstanding debt service obligations;
- D. Fund payments to the City of San Antonio; and
- E. Pay any other debt payable from the net revenues.

FUNDS FLOW

City Ordinance No. 75686 adopted April 30, 1992 requires that Gross Revenues of the System be applied in sequence to:

1. Pay Operations and Maintenance Expenses, including a two-month operating reserve
2. Deposit into Debt Service fund the amount required for:
 - a. Senior Lien debt obligations and Reserve Fund obligations
 - b. Junior Lien debt obligations
 - c. Subordinate Lien debt obligations
 - d. Inferior Lien debt obligations
3. Equal payments to the City of San Antonio's General Fund and to SAWS Renewal and Replacement Fund

PAYMENTS TO THE CITY OF SAN ANTONIO GENERAL FUND

City Ordinance No. 75686 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. Since the inception of SAWS in 1992, the transfer to the City had been set at 2.7% of Gross Revenues. After consultation with SAWS, the City increased the percentage to 4.0% in late 2019. Payments to the City are reported as non-operating expense in the Statements of Revenues, Expenses and Changes in Net Position.

FUND STRUCTURE

Within SAWS' enterprise fund accounts, separate self-balancing sub-funds are maintained to account for resources for various purposes, thereby distinguishing balances restricted by City Ordinance or other enabling legislation from unrestricted resources.

SYSTEM FUND

All Gross Revenues shall be credited to this fund upon receipt, unless otherwise provided in City Ordinance No. 75686. All current expenses of operations and maintenance shall be paid from this fund as a first charge against the gross revenues so credited. Before making any deposits to other funds required to be made from the System Fund, the Board of Trustees shall retain in the System Fund at all times an amount at least equal to two months of the amount budgeted for the current fiscal year for current operations and maintenance expenses.

DEBT SERVICE FUND

The sole purpose of this fund is for the payment of principal and interest on all bonds which are payable from pledged revenues.

RESERVE FUND

This fund shall be used to pay the principal and interest on any bonds when and to the extent the amounts in the Debt Service Fund are insufficient for such purpose and may be used for the purpose of finally retiring the last of any bonds.

PROJECT FUND

This fund shall be used to account for the proceeds of debt obligations and investment earnings thereon. Funds may only be used to pay for capital improvements in accordance with bond agreements and Internal Revenue Service regulations related to tax-exempt borrowings.

RENEWAL AND REPLACEMENT FUND

This fund shall be used for the purpose of

1. Paying the costs of improvements, enlargements, extensions, additions, replacements, or other capital expenditures, or
2. Paying the costs of unexpected extraordinary repairs or replacements for which System Funds are not available
3. Paying unexpected or extraordinary expenses of operations and maintenance for which System Funds are not otherwise available
4. Depositing any funds received by SAWS pursuant to the CPS Energy contract
5. Paying bonds or other SAWS' obligations for which other System revenues are not available
6. Making up any shortfall in the Payment to the City of San Antonio General Fund as required by Section 17 of Ordinance 75686 and
7. For any other lawful purpose.

DEBT MANAGEMENT**CAPITAL PLANNING**

A five-year Capital Improvement Program is developed and updated annually, including anticipated funding sources. During the annual budgeting process, the current year's capital improvement projects are reviewed and prioritized to ensure consistency with SAWS' goals and objectives.

CAPITAL FINANCING

Capital financing will typically include two types of funding – pay-as-you-go and debt financing.

1. Pay-as-you-go financing is an integral part of the overall capital-financing plan. Pay-as-you-go financing is defined as all sources of funding other than debt issuance and includes unrestricted resources, capital recovery/impact fees, investment earnings, contributions in aid of construction and certain grant proceeds.
2. The use of debt financing will be based, in part, on SAWS' long-term needs and the amount of funds available for pay-as-you-go financing. The following criteria will be used to evaluate pay-as-you-go versus debt financing:
 - Factors which favor pay-as-you-go financing:
 - Current revenues and adequate liquidity are available
 - Debt levels would adversely affect SAWS' credit rating or market conditions are unstable or present difficulties in marketing debt
 - Factors which favor debt financing include:
 - Revenues available for debt service are considered sufficient and reliable so that debt financing can be marketed with the appropriate credit rating
 - Market conditions present favorable interest rates and demand for municipal financings
 - Federal or state subsidized debt is available to finance specific capital improvements

DEBT LIMIT

There is no statutory debt limitation on the issuance of revenue indebtedness by the San Antonio Water System, acting on behalf of the City of San Antonio, Texas. SAWS has established its own policies regarding the utilization of debt instruments.

The currently outstanding bond ordinances impose conditions precedent on the issuance of additional revenue bonds and require Net Revenues of 125% of maximum annual debt service in order to issue senior lien revenue bonds and 100% of average annual debt service in order to issue junior lien revenue bonds in a public offering.

DEBT POLICY

- Debt financing should only be used to fund capital improvements and should not be used for operating purposes.
- SAWS shall maintain rates and charges sufficient to ensure that Net Revenues equal or exceed 1.25 times the Annual Debt Service Requirements for the current fiscal year on SAWS' outstanding Senior Lien Obligations as required by the bond indenture. SAWS currently targets to maintain Net Revenues equal to at least 2.00 times Annual Senior Lien Debt Service and 1.70 to 1.75 times Total Annual Debt Service to ensure the required debt coverage in times of revenue fluctuations.
- SAWS shall analyze each new debt issue to ensure compliance with SAWS' debt policies and determine the impact of the new debt issue on SAWS' overall debt capacity.
- SAWS shall move toward a goal of funding approximately 50% of capital expenditures with non-debt sources.
- SAWS may maintain a variable rate component of debt of no more than 30% of its outstanding debt.
- SAWS shall employ an interest rate mitigation strategy to mitigate interest rate risk associated with variable rate debt.
- SAWS seeks to maintain or improve its current credit rating to ensure continued access to capital markets and minimize borrowing cost.
- The term of debt issued should not exceed the expected useful life of the capital improvements being financed.

RESERVE POLICIES

- As required by ordinance, an operating reserve shall be maintained in the SAWS System Fund consisting of a two-month reserve of the current year's budgeted maintenance and operation expenses.
- SAWS' target is to maintain unrestricted Days Cash on Hand of approximately 300 days.
- The Debt Service Fund will be funded with revenues sufficient to pay the principal and interest of SAWS' bonded debt as it becomes payable.
- Deposits shall be made to the Renewal and Replacement Fund in amounts equal to the amount payable to the City of San Antonio pursuant to the bond indenture. These funds will typically be used to fund capital improvements.
- Deposits shall be made to the Reserve Fund pursuant to SAWS bond indentures. These deposits will be made with proceeds from bonds issued or with unrestricted resources. SAWS may provide surety policies in amounts equal to all or part of the required reserve amount in lieu of depositing cash into the Reserve Fund.

FINANCIAL PLANNING PROCESS

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FINANCIAL PLANNING PROCESS

LONG RANGE FINANCIAL PLANNING

Long-range financial planning is critical for SAWS to accomplish its mission. The overriding goal of financial planning, analysis and strategy development is to improve SAWS financial position in order to meet its short-term and long-term operational and strategic objectives. In developing the SAWS financial plan, concerns of all stakeholders are considered with various scenarios and potential risks evaluated by executive management in reaching the optimum balance of limited resources with organizational needs and stakeholder concerns.

The financial plan is organized into two distinct planning horizons in order to facilitate management of the system: Short-term of five years in length, and long-term of five to twenty years in length. The planning horizons play a key role in prioritizing SAWS' strategic, operational and financial needs and resources.

The short-term planning horizon is the basis for implementing, through the formalized budget, short-term goals and objectives in support of the strategic plan. The long-term planning process sets the course of the overall direction of financial, operational and capital resource allocation priorities of the system.

Major strategic policy guidelines emphasized are long-term water supply needs and infrastructure replacement goals. Strategic priorities include, but are not limited to, water supply, system expansion, environmental sustainability, system reliability and service consistency, innovation and technology, financial strength, and human resource development. All priorities are planned through operational, capital, and financial resource assessment and allocation.

A crucial component of SAWS' financial management strategy is the comprehensive 20-year Multi-Year Financial Plan (MYFP). The MYFP serves as a foundation supporting SAWS' strategic, operational, investment, and financial planning functions. Through analyses of cash flow probabilities and risk, investment and financing opportunities and constraints, and strategic plan goals and targets, financial forecasts are made in the MYFP to assist executive management in the allocation of SAWS' resources.

The MYFP provides a critical planning platform to perform statistical risk and resource allocation analyses through scenario, simulation and constraint modeling on revenues, operations and maintenance expense, capital expenditures, capital financing, including cash and debt financing and rate requirements. Resource utilization analyses and planning help identify factors affecting SAWS' strategic outcomes and provide opportunities for new strategies and program development to allocate resource costs for various growth and replacement scenarios.

The fundamental structure of the MYFP is the calculation of the flow of funds and rate adjustment requirements based on SAWS enabling Ordinance 75686, adopted on April 30, 1992. This ordinance outlines important financial requirements and calculations that SAWS uses in the MYFP to calculate rates and charges, flow of funds, pledged revenues toward debt service, debt coverage ratios and fund requirements. The MYFP incorporates forecasts and requirements by each of SAWS' core businesses: Water Supply, Water Delivery, Wastewater and Chilled Water.

ANNUAL BUDGET PROCESS

The annual budget process begins with updating the MYFP. As part of this process, Business Planning staff review SAWS' financial activity, levels of service provided, customer growth and consumption patterns, weather trends and financial market trends. In addition, the following variables are also evaluated:

- Available funding
- Financial risk
- Regulatory requirements
- Level of services that can be sustained
- Capital investment requirements
- Future commitments and resource demands
- Other variables that could cause a change in the level of revenue

Business Planning staff and executive management review the resulting financial forecasts and plans to ensure that forecasted revenues are sufficient to meet projected financial needs. If it becomes evident that forecasted revenues are not sufficient to address forecasted operations, maintenance, infrastructure and water supply needs, then staff evaluates rate scenarios to calculate the optimum rate adjustment that will balance affordable and competitive rates with the need to continue providing necessary services.

All potential pricing adjustments are evaluated in the context of customer affordability measures and key financial statistics. The affordability of customer bills is evaluated relative to the income of SAWS' customers and price competitiveness with other utilities. Key financial statistics include: debt coverage ratios for total debt, percentage of capital financed with cash and overall level of cash balances.

2021 BUDGET PROCESS

The 2021 budget process began with identifying SAWS' short-term priorities. The focus of the 2021-2025 financial forecast included the following objectives:

- New water supply sources are integrated
- Employee pay and benefits are fair and competitive
- Retirement obligations are valued appropriately and adequately funded
- Infrastructure is adequately maintained to ensure reliability of service and compliance with regulatory requirements
- Technology advancements are implemented in order to increase productivity and enhance customer interactions
- Strong financial metrics and debt ratings are maintained

REVENUE FORECAST

The following table includes a sample of the issues driving the 2021 revenue forecast.

Revenue Source	Drivers
Operating Revenues	Anticipated COVID-19 impacts to customer consumption and economic growth
	Mitigate impacts of sustained periods of above normal rainfall
	Effect of conservation programs and tiered water rates on customer usage
Non-operating Revenues	Anticipated decline in short-term interest rates
Capital Recovery Fees	Utilized for capital funding - dependent upon development activity; projected to remain strong

One of the key elements of the financial planning process is the assessment of risk and impact of errors in forecasted revenues. Errors in the revenue forecast will cause inefficiencies to the system. The value of these inefficiencies will be evident once management has to take corrective action due to the forecast error. Overestimating revenues causes excess allocation of capital resources. Adjusting these resources or changing to alternative resources can be time intensive and costly. On the other hand, underestimating revenues results in underutilization of resources in the current period. However, these resources can be put to use in subsequent planning periods. The risk to the system from overestimating revenues are assumed to be of greater significance than the risk to the system from underestimating revenues.

OPERATIONS AND MAINTENANCE BUDGET

Current Services Level

The 2021 budget process involved a calculation of the Current Services Level budget, which was an estimate of the cost required to maintain the current level of services in 2021. The Current Services Level budget served as the baseline for all subsequent 2021 budget changes and was developed from the following components:

- Snapshot of employee wage and benefit costs as of May 2020
- Estimated 2021 utility costs, including a provision for any electric and gas utility rate increases
- Estimated 2021 fuel costs
- Elimination of one-time 2020 budgeted expenses

Improvements and/or Mandates

Departments requiring additional funding for improvements or newly identified mandates that exceeded the 2021 Current Services Level were required to submit decision packages to include detailed justification for each specific request. In addition, departments were required to submit reduction packages for one-time and recurring cost savings.

Budget Development and Review

- Vice presidents/department directors reviewed current programs, activities and current levels of service provided to their customers. Additionally, they evaluated and prioritized new departmental needs.
- During individual departmental reviews, 2020 spending levels were compared to proposed 2021 budget spending levels, with appropriate adjustments being made.
- The Executive Management Team (EMT) conducted a comprehensive review of decision packages submitted. During this review, all requests for additional funding were prioritized and were approved or denied based on this prioritization. This review by the EMT further ensured that departmental budgets were aligned with corporate goals and objectives.

CAPITAL IMPROVEMENT PROGRAM

The 2021 program was developed using a project prioritization process. Projects generated by the CIP stakeholder groups from SAWS Treatment, Production, Master Planning, Plants & Major Projects, Operations, Information Services and Distribution & Collections were reviewed and evaluated by a CIP Planning Group consisting of vice presidents, directors and managers from SAWS Engineering and Operations groups. The evaluation and prioritization process addressed the business and information system risk exposures, independent of available funds, by prioritizing the projects as either Mandatory, Critical or High priority, using the following criteria.

Mandatory	Critical	High
Loss of life or limb	Risk of injury	Corporate initiatives
Legal/Regulatory requirements	Legal/Regulatory implications	City/State conflicts
High customer dissatisfaction	Customer dissatisfaction	Customer dissatisfaction
Significant mission disruption	Mission delay	Needed system improvements

Water Delivery

In coordination with the Vice Presidents of Distribution & Collection and Engineering & Construction, and the Chief Operating Officer, these criteria were applied to the selection of water main replacement and new water main projects. The remaining water delivery projects were also evaluated considering the criteria in deliberations with the Director of Plants and Major Projects and the managers in that group. This resulted in several projects being categorized as non-Mandatory allowing them to be delayed for implementation in years beyond 2021 to meet budget requirements and to balance the CIP level of expenditure in future years.

Wastewater

Wastewater main replacements were driven by the Consent Decree requirements, with most of the projects being designated as Mandatory and the rest as Critical. Treatment projects were evaluated, and the projects selected by the Vice Presidents of Production & Treatment and Engineering & Construction were deemed either Mandatory or Critical.

Water Supply

Water Supply projects were focused on the rehabilitation of the transmission pipelines to deliver groundwater supplies. These projects were also carefully evaluated, and projects that could be delayed to future years were not included in the 2021 CIP.

Overall, the 2021 CIP has 53% of projects prioritized as Mandatory, 47% critical, and less than 1% as High priority. See the table below for a breakout by Core Business and Priority.

Core Business	Mandatory	Critical	High	Total
Water Delivery	\$ 100,276,588	\$ 80,139,008	\$ 1,975,980	\$ 182,391,576
Wastewater	179,109,038	146,833,756	-	325,942,794
Water Supply	6,566,750	26,324,510	-	32,891,260
Chilled Water	125,000	-	-	125,000
2021 CIP Total	\$ 286,077,376	\$ 253,297,274	\$ 1,975,980	\$ 541,350,630

The 2021 CIP has been developed using recent cost estimates to include SAWS overhead expenses and an annual inflation assumption of 2.8% for 2021 and future years. The 2021 and 5-year CIP project lists were reviewed in detail, and final selection was recommended by the SAWS Executive Management Team.

The 2021 CIP projects were collected, reviewed and summarized in the SAWS Capital Projects Management System (CPMS), which was brought online in mid-2015. This enterprise project management system streamlines the CIP process and increases the efficiency and visibility of the program.

Please note the Capital Improvement Program project list is subject to change due to funding, project needs and emergencies.

2021 BUDGET TIMELINE

Action		2020				2021
		Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec	Jan
Develop Multi-Year Financial Plan	Review financial outlook	■				
	Compile assumptions for Multi Year Financial Plan (MYFP)	■				
	Review budget and rates plan with key internal stakeholders	■				
	Management review and approval of MYFP		■	■	■	
	Develop revenue forecast		■	■		
Establish Executive Directives	Review policy and guideline statements		■	■		
	Provide guidance on employee compensation issues		■	■		
	Establish O&M and CIP expectations		■	■		
Budget Development	Review and update CIP needs		■	■		
	Develop workforce budget from current workforce data		■	■		
	Develop Current Services Level Budget		■	■		
	Develop departmental budgets			■	■	
Review and Analysis	Review of O&M and CIP budgets by Business Planning staff			■	■	
	Review of O&M and CIP budgets by Executive Mgt.			■	■	
Develop Budget Documents	Prepare Budget / Rates presentation			■	■	
	Develop Proposed Budget document			■	■	
	Develop Adopted Budget document				■	
Board Review and Approval	Budget briefings for Board of Trustees				■	■
	Formal Board approval of 2021 annual budget				■	■
	Submit Budget to City Council for review and consultation				■	■
Implementation	2021 Annual Operating Budget and Capital Improvement Program become effective					■

SHORT-TERM FIVE-YEAR FORECAST

The current projection of SAWS sources and uses of funds for the period 2021 – 2025 is shown in the table below.

\$ in millions	2021 Budget	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast
Sources of Funds					
Revenue, incl. prior adjustments	\$ 800.8	\$ 817.2	\$ 846.7	\$ 888.2	\$ 942.2
Rate Adjustment, incremental	-	18.0	29.2	45.1	37.5
Nonoperating Revenues	8.5	11.0	14.0	17.0	16.0
Draw on Equity	-	-	-	-	-
Capital Recovery Fees	100.1	100.1	100.1	100.1	100.1
Total Sources of Funds	\$ 909.4	\$ 946.3	\$ 990.0	\$ 1,050.4	\$ 1,095.8
Uses of Funds					
Operations and Maintenance	\$ 454.0	\$ 462.4	\$ 471.4	\$ 481.4	\$ 490.5
Debt Service & Expenses	223.4	240.6	266.0	292.9	311.9
Transfer to City of San Antonio	30.9	32.4	34.1	36.5	38.4
Available for R&R Restricted	102.8	103.4	104.1	103.8	103.7
Available for R&R Unrestricted	98.3	107.5	114.4	135.8	151.3
Total Uses of Funds	\$ 909.4	\$ 946.3	\$ 990.0	\$ 1,050.4	\$ 1,095.8

The sources of funds primarily include revenues from metered customers, with anticipated adjustments to the metered revenues required to fund the projected operational and capital needs of the system. A discussion of the drivers of the revenues, growth in customers, and changes in use per customer are discussed in the revenue section of this book.

Projected increases in operations and maintenance costs over the forecast period are driven by inflationary pressures as well as operating costs associated with the acquisition of new water supplies. SAWS began receiving water from the Vista Ridge Pipeline Project in April 2020, and will complete its first full year of operation in 2021, contributing to the increases in operations and maintenance expenses in 2021 over the 2020 budget.

The growth in debt service reflects the allocation of capital resources toward major strategic priorities of water supply, infrastructure replacement, system growth, and sustainability. The five-year 2021 – 2025 capital improvement program is projected at \$2.58 billion as shown below. A significant priority includes wastewater capital replacement projects associated with the wastewater Sanitary Sewer Overflow Reduction Program (SSORP).

CIP (\$ in millions)	2021	2022	2023	2024	2025	Total 2021-2025
Water Delivery	\$ 182.4	\$ 212.2	\$ 208.7	\$ 228.5	\$ 240.6	\$ 1,072.4
Wastewater	326.0	224.0	283.9	254.0	158.1	1,246.0
Water Supply	32.8	137.7	26.7	33.2	27.7	258.1
Chilled Water	0.1	0.1	0.1	0.1	0.1	0.5
Total	\$ 541.3	\$ 574.0	\$ 519.4	\$ 515.8	\$ 426.5	\$ 2,577.0

Funding for the five-year capital improvement program is projected to come from a mixture of renewal and replacement funds, impact fees, investment income, and bond proceeds. While SAWS long term goal is for approximately 50% of capital improvements to be funded from non-debt sources, during the 2021-2025 five-year forecast, the percentage of the capital improvements funded with non-debt sources is currently projected to average 40.8%.

CIP (\$ in millions)	2021	2022	2023	2024	2025
Capital Improvement Program					
Budget	\$ 541.3	\$ 574.0	\$ 519.4	\$ 515.8	\$ 426.5
Capital Improvement Program Funding					
Revenue/Renewal & Replacement	32.5%	15.5%	19.0%	20.6%	29.9%
Capital Recovery Fees	15.1%	19.7%	15.4%	17.5%	21.1%
Bonds/Commercial Paper	52.4%	64.8%	65.6%	61.9%	49.0%
Cash Funding	\$ 257.7	\$ 202.1	\$ 178.7	\$ 196.3	\$ 217.5
Debt Funding	\$ 283.6	\$ 371.9	\$ 340.7	\$ 319.5	\$ 209.0

The forecasted amounts for 2021-2025 will continue to be analyzed and adjusted as additional efficiencies are identified, circumstances change or priorities shift.

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ANNUAL OPERATING BUDGET

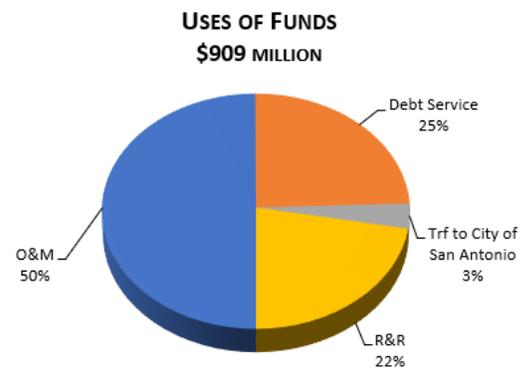
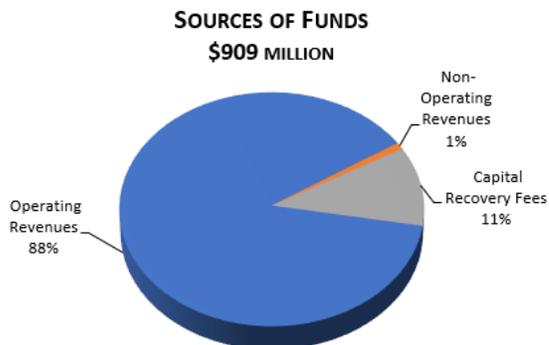
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ANNUAL OPERATING BUDGET

FINANCIAL PLAN SUMMARY

The following table summarizes the consolidated Sources and Uses of Funds that comprise the SAWS Operating Budget.

<i>(dollars in thousands)</i>	2018 Actual	2019 Actual	2020 Budget	2021 Budget
SOURCES OF FUNDS				
Operating Revenues				
Sewer Service Charges	\$ 255,097	\$ 270,831	\$ 271,040	\$ 272,732
Metered Water Sales	223,460	234,470	231,537	227,553
Water Supply Fee	153,602	168,227	246,360	244,024
EAA Fee	22,574	23,421	23,616	23,731
Chilled Water Sales	10,849	10,615	10,415	10,415
Conservation	11,561	12,062	10,718	10,791
Industrial Waste Surcharge	6,245	6,370	6,114	5,118
Recycled Water System	5,530	6,050	6,259	6,413
Stormwater	4,891	4,828	5,204	5,235
Recovery of TCEQ Fees	2,148	2,223	2,360	2,548
Reduction for Affordability Program	(4,911)	(5,918)	(6,543)	(7,802)
Total Operating Revenues	691,046	733,179	807,080	800,758
Nonoperating Revenues	17,866	25,451	20,000	6,500
Build America Bonds Subsidy	3,546	3,317	2,035	2,022
Total Revenues	712,458	761,947	829,115	809,280
Capital Recovery Fees	79,794	94,641	100,075	100,075
Contributions in Aid of Construction	6,434	9,259	-	-
Draw on Equity	1,400	1,400	-	-
Total Sources of Funds	\$ 800,086	\$ 867,247	\$ 929,190	\$ 909,355
USES OF FUNDS				
Operations and Maintenance	\$ 330,235	\$ 339,934	\$ 435,982	\$ 454,048
Revenue Bond Debt Requirement	201,288	202,211	225,327	218,422
Other Debt Service Requirement	3,921	4,879	10,574	4,932
Transfer to the City of San Antonio	18,287	21,918	31,681	30,931
Balance Available for:				
Renewal and Replacement Fund (Restricted)	90,992	110,001	108,083	102,779
Renewal and Replacement Fund (Unrestricted)	155,363	188,304	117,543	98,243
Total Uses of Funds	\$ 800,086	\$ 867,247	\$ 929,190	\$ 909,355



FINANCIAL PLAN SUMMARY BY CORE BUSINESS

The San Antonio Water System consists of four core businesses. Each core business generates revenues that are designed to recover their respective cost of service. The core businesses are Water Supply, Water Delivery, Wastewater, and Chilled Water.

The following schedule reflects the 2021 budget for Sources and Uses of Funds by core business:

<i>(dollars in thousands)</i>	Water Supply	Water Delivery	Wastewater	Chilled Water	Total
SOURCES OF FUNDS					
Operating Revenues					
Sewer Service Charges	\$ -	\$ -	\$ 272,732	\$ -	\$ 272,732
Metered Water Sales		227,553			227,553
Water Supply Fee	244,024				244,024
EAA Fee	23,731				23,731
Chilled Water Sales				10,415	10,415
Conservation	10,791				10,791
Industrial Waste Surcharge			5,118		5,118
Recycled Water System	6,413				6,413
Stormwater	5,235				5,235
Recovery of TCEQ Fees		1,962	586		2,548
Reduction for Affordability Program	(2,478)	(1,512)	(3,812)		(7,802)
Intercompany Reallocations	5,630	(5,630)			-
Total Operating Revenues	293,346	222,373	274,624	10,415	800,758
Nonoperating Revenues	1,950	1,950	2,600	-	6,500
Build America Bonds Subsidy	635	578	809	-	2,022
Total Revenues	295,931	224,901	278,033	10,415	809,280
Capital Recovery Fees	38,363	30,100	31,612	-	100,075
Draw on Equity	-	-	-	-	-
Total Sources of Funds	\$ 334,294	\$ 255,001	\$ 309,645	\$ 10,415	\$ 909,355
USES OF FUNDS					
Operations and Maintenance	\$ 237,254	\$ 93,333	\$ 116,442	\$ 7,019	\$ 454,048
Revenue Bond Debt Requirement	38,658	80,263	96,376	3,125	218,422
Other Debt Service Requirement	560	2,034	2,263	75	4,932
Transfer to the City of San Antonio	10,489	8,957	11,068	417	30,931
Balance Available for:					
Renewal and Replacement Fund (Restricted)	39,356	30,800	32,608	15	102,779
Renewal and Replacement Fund (Unrestricted)	7,977	39,614	50,888	(236)	98,243
Total Uses of Funds	\$ 334,294	\$ 255,001	\$ 309,645	\$ 10,415	\$ 909,355

WATER SUPPLY CORE BUSINESS

The Water Supply core business is responsible for all functions related to the development and provision of additional Water Supply, including recycled water. In order to support the cost associated with these initiatives, SAWS implemented the Water Supply Fee in 2001, which is a separate funding mechanism for Water Supply development and water quality protection. The Water Supply core business also strives to extend SAWS' existing water supplies by promoting water conservation practices.

<i>(dollars in thousands)</i>	2018 Actual	2019 Actual	2020 Budget	2021 Budget
SOURCES OF FUNDS				
Operating Revenues				
Water Supply Fee	\$ 153,602	\$ 168,227	\$ 246,360	244,024
EAA Fee	22,574	23,421	23,616	23,731
Conservation	11,561	12,062	10,718	10,791
Recycled Water System	5,530	6,050	6,259	6,413
Stormwater	4,891	4,828	5,204	5,235
Reduction for Affordability Program	(1,114)	(1,376)	(1,796)	(2,478)
Intercompany Reallocations	5,630	5,630	5,630	5,630
Total Operating Revenues	202,674	218,842	295,991	293,346
Nonoperating Revenues	6,090	6,923	6,000	1,950
Build America Bonds Subsidy	922	854	637	635
Total Revenues	209,686	226,619	302,628	295,931
Capital Recovery Fees	32,163	37,792	38,363	38,363
Contributions in Aid of Construction	510		-	
Draw on Equity	1,400	1,400	-	-
Total Sources of Funds	\$ 243,759	\$ 265,811	\$ 340,991	\$ 334,294
USES OF FUNDS				
Operations and Maintenance	\$ 124,203	\$ 124,722	\$ 208,556	\$ 237,254
Revenue Bond Debt Requirement	50,622	45,197	42,499	38,658
Other Debt Service Requirement	1,068	961	1,175	560
Transfer to the City of San Antonio	4,812	5,869	10,762	10,489
Balance Available for:				
Renewal and Replacement Fund (Restricted)	34,083	37,907	44,048	39,356
Renewal and Replacement Fund (Unrestricted)	28,971	51,155	33,951	7,977
Total Uses of Funds	\$ 243,759	\$ 265,811	\$ 340,991	\$ 334,294

WATER DELIVERY CORE BUSINESS

The Water Delivery core business is responsible for the actual distribution of water from the source to the customers' premises. SAWS delivers potable water service to residential, commercial, multifamily, industrial and wholesale customers. Another primary function of this core business is the maintenance of the water system infrastructure.

<i>(dollars in thousands)</i>	2018 Actual	2019 Actual	2020 Budget	2021 Budget
SOURCES OF FUNDS				
Operating Revenues				
Metered Water Sales	\$ 223,460	\$ 234,470	\$ 231,537	\$ 227,553
Recovery of TCEQ Fees	1,683	1,743	1,822	1,962
Reduction for Affordability Program	(1,114)	(1,380)	(1,440)	(1,512)
Intercompany Reallocations	(5,630)	(5,630)	(5,630)	(5,630)
Total Operating Revenues	218,399	229,203	226,289	222,373
Nonoperating Revenues	4,988	7,343	6,000	1,950
Build America Bonds Subsidy	1,089	1,022	583	578
Total Revenues	224,476	237,568	232,872	224,901
Capital Recovery Fees	20,824	25,022	30,100	30,100
Contributions in Aid of Construction	4,721	8,210	-	-
Draw on Equity	-	-	-	-
Total Sources of Funds	\$ 250,021	\$ 270,800	\$ 262,972	\$ 255,001
USES OF FUNDS				
Operations and Maintenance	\$ 90,374	\$ 92,551	\$ 94,372	\$ 93,333
Revenue Bond Debt Requirement	67,827	72,288	77,222	80,263
Other Debt Service Requirement	1,938	2,486	4,340	2,034
Transfer to the City of San Antonio	6,027	7,195	9,255	8,957
Balance Available for:				
Renewal and Replacement Fund (Restricted)	26,802	34,825	31,084	30,800
Renewal and Replacement Fund (Unrestricted)	57,053	61,455	46,699	39,614
Total Uses of Funds	\$ 250,021	\$ 270,800	\$ 262,972	\$ 255,001

WASTEWATER CORE BUSINESS

The Wastewater core business's primary function is the collection and treatment of wastewater. The functions also extend to monitoring wastewater discharged by large industries into the sewer collection system.

<i>(dollars in thousands)</i>	2018 Actual	2019 Actual	2020 Budget	2021 Budget
SOURCES OF FUNDS				
Operating Revenues				
Sewer Service Charges	\$ 255,097	\$ 270,831	\$ 271,040	\$ 272,732
Industrial Waste Surcharge	6,245	6,370	6,114	5,118
Recovery of TCEQ Fees	465	480	538	586
Reduction for Affordability Program	(2,683)	(3,162)	(3,307)	(3,812)
Total Operating Revenues	259,124	274,519	274,385	274,624
Nonoperating Revenues	6,622	10,993	8,000	2,600
Build America Bonds Subsidy	1,535	1,441	815	809
Total Revenues	267,281	286,953	283,200	278,033
Capital Recovery Fees	26,807	31,827	31,612	31,612
Contributions in Aid of Construction	1,203	1,049	-	-
Draw on Equity	-	-	-	-
Total Sources of Funds	\$ 295,291	\$ 319,829	\$ 314,812	\$ 309,645
USES OF FUNDS				
Operations and Maintenance	\$ 108,188	\$ 113,874	\$ 125,618	\$ 116,442
Revenue Bond Debt Requirement	79,954	81,699	102,462	96,376
Other Debt Service Requirement	819	1,352	4,905	2,263
Transfer to the City of San Antonio	7,151	8,527	11,247	11,068
Balance Available for:				
Renewal and Replacement Fund (Restricted)	30,150	37,144	32,951	32,608
Renewal and Replacement Fund (Unrestricted)	69,029	77,233	37,629	50,888
Total Uses of Funds	\$ 295,291	\$ 319,829	\$ 314,812	\$ 309,645

CHILLED WATER CORE BUSINESS

The Chilled Water core business provides cooling services to SAWS customers, including various downtown hotels, the City of San Antonio Convention Center, Hemisfair Plaza, Alamodome and Port San Antonio tenants.

<i>(dollars in thousands)</i>	2018 Actual	2019 Actual	2020 Budget	2021 Budget
SOURCES OF FUNDS				
Operating Revenues				
Chilled Water Sales	\$ 10,849	\$ 10,615	\$ 10,415	\$ 10,415
Total Operating Revenues	10,849	10,615	10,415	10,415
Nonoperating Revenues				
Build America Bonds Subsidy	166	192	-	-
	-	-	-	-
Total Revenues	11,015	10,807	10,415	10,415
Capital Recovery Fees				
Draw on Equity	-	-	-	-
Total Sources of Funds	\$ 11,015	\$ 10,807	\$ 10,415	\$ 10,415
USES OF FUNDS				
Operations and Maintenance	\$ 7,470	\$ 8,788	\$ 7,436	\$ 7,019
Revenue Bond Debt Requirement	2,885	3,027	3,145	3,125
Other Debt Service Requirement	96	80	154	75
Transfer to the City of San Antonio	297	327	417	417
Balance Available for:				
Renewal and Replacement Fund (Restricted)	(43)	125	-	15
Renewal and Replacement Fund (Unrestricted)	310	(1,540)	(737)	(236)
Total Uses of Funds	\$ 11,015	\$ 10,807	\$ 10,415	\$ 10,415

NET POSITION

Net Position is the difference between the assets and liabilities of SAWS as reflected on the statement of net position and is a key indicator of financial condition. It is the measure of financial resources available for future use after payment of all obligations.

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.

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.

The remaining balance of SAWS' net position is unrestricted and may be used for any allowable purpose as outlined in Ordinance 75686.

SAWS is an enterprise fund and has no governmental funds. The following schedule reflects the components of projected Net Position at December 31, 2020 and 2021, for the entity as a whole.

<i>(dollars in thousands)</i>	Net Investment in Capital Assets	Restricted Operating Reserve	Restricted Debt Service	Restricted Debt Service Reserve ¹	Restricted Construction	Unrestricted ²	Projected Net Position
Projected Net Position, beginning of year	\$ 2,950,693	\$ 72,664	\$ 65,696	\$ 18,822	\$ 192,548	\$ 418,939	\$ 3,719,362
Operating income						408,169	408,169
Depreciation	(198,931)						(198,931)
Net non-operating income/(expense)						(182,027)	(182,027)
Capital Recovery Fees collected					100,075		100,075
Plant contributions	80,000						80,000
Transfer to Operating Reserve		1,405				(1,405)	-
Required debt service transfers	5,954		213,806	(5,954)		(213,806)	-
Projected debt service payments	94,105		(214,076)			119,971	-
Non-debt funding of capital improvements	257,722				(85,000)	(172,722)	-
Projected Net Position, end of year	\$ 3,189,543	\$ 74,069	\$ 65,426	\$ 12,868	\$ 207,623	\$ 377,119	\$ 3,926,648
% Change in Net Position	8.1%	1.9%	-0.4%	-31.6%	7.8%	-10.0%	5.6%

¹The Debt Service Reserve decrease expected in 2021 is due to the anticipated refunding of outstanding senior lien debt obligations with junior lien obligations, which will not require a Debt Service Reserve component.

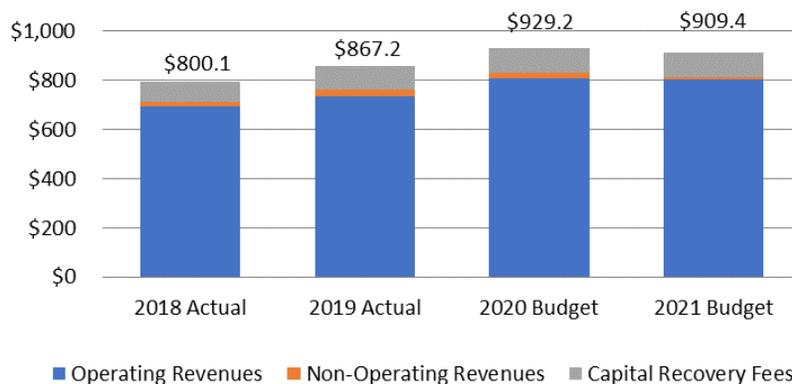
²The projected decrease in Unrestricted net position reflects an additional \$68 million in unrestricted cash reserves being used to fund capital improvements.

SOURCES OF FUNDS

The following table summarizes the 2021 budgeted Sources of Funds for all core businesses.

<i>(dollars in thousands)</i>	2018 Actual	2019 Actual	2020 Budget	2021 Budget
SOURCES OF FUNDS				
Operating Revenues				
Sewer Service Charges	\$ 255,097	\$ 270,831	\$ 271,040	\$ 272,732
Metered Water Sales	223,460	234,470	231,537	227,553
Water Supply Fee	153,602	168,227	246,360	244,024
EAA Fee	22,574	23,421	23,616	23,731
Chilled Water Sales	10,849	10,615	10,415	10,415
Conservation	11,561	12,062	10,718	10,791
Industrial Waste Surcharge	6,245	6,370	6,114	5,118
Stormwater	4,891	4,828	5,204	5,235
Recycled Water System	5,530	6,050	6,259	6,413
Recovery of TCEQ Fees	2,148	2,223	2,360	2,548
Reduction for Affordability Program	(4,911)	(5,918)	(6,543)	(7,802)
Total Operating Revenues	691,046	733,179	807,080	800,758
Nonoperating Revenues	17,866	25,451	20,000	6,500
Build America Bonds Subsidy	3,546	3,317	2,035	2,022
Total Revenues	712,458	761,947	829,115	809,280
Capital Recovery Fees	79,794	94,641	100,075	100,075
Contributions in Aid of Construction	6,434	9,259	-	-
Draw on Equity	1,400	1,400	-	-
Total Sources of Funds	\$ 800,086	\$ 867,247	\$ 929,190	\$ 909,355

SOURCES OF FUNDS (\$ IN MILLIONS)



REVENUES

Sources of funds include operating revenues, non-operating revenues, Build America Bonds subsidy, and capital recovery fees. Operating revenues consist primarily of revenues generated through metered billings for potable water, recycled water, wastewater and chilled water services. Additional operating revenues include special services fees designed to recover costs associated with providing services that typically benefit a particular customer or type of service. These services include various permit, sampling or laboratory fees, and account services.

WATER AND WASTEWATER CUSTOMER AND USAGE TRENDS

Over 95% of SAWS operating revenues come from the Water Supply Fee, Metered Water Sales, Sewer Service Charges, and the EEA fee, which all vary based on customer's metered water usage. Fluctuations in system wide metered water usage are primarily tied to changes in:

- the number of customer connections
- the average use per customer

In the budget process, customer connections and usage data statistics and trends are tracked by each rate block to generate multiple revenue forecast projections, including:

- each rate class of SAWS (residential, general, wholesale and irrigation)
- each rate block
- inside and outside city limit customers

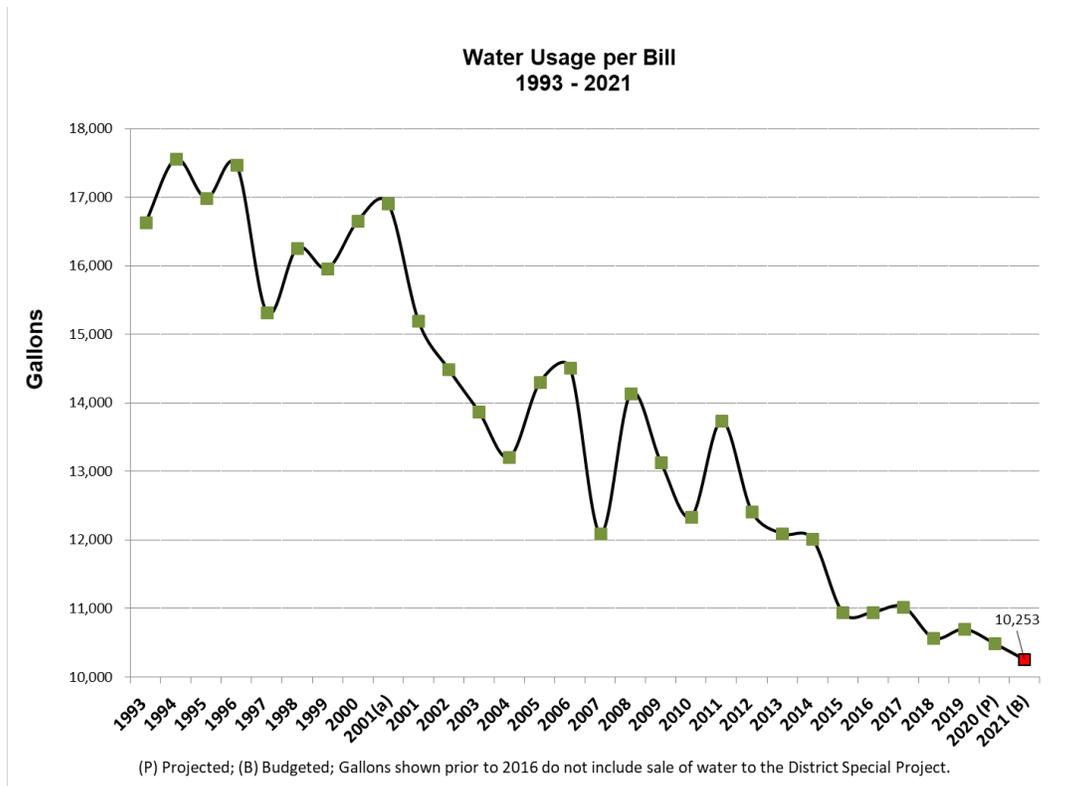
Through this systematic and comprehensive approach to forecasting metered revenues, SAWS has been able to identify developing shifts in usage patterns and underlying trends in customers' water usage. These customer connections and usage forecasts are aggregated to develop a comprehensive forecast for water and wastewater revenues of the system.

Since 2015, SAWS has experienced very similar rates of growth in the number of both water and wastewater customers. This trend is expected to continue during 2021.

Average usage per customer is typically affected by weather (temperature and precipitation), seasonality, price elasticity, conservation, and drought restriction variables. Therefore, the modeling of the average usage per customer incorporates statistical forecasting to incorporate these variables. Additionally, due to the COVID-19 pandemic, SAWS has seen slight increases in single and multi-family residential usage and more significant declines in commercial usage, especially in commercial customers tied to the restaurant and hospitality sectors.

The following chart shows the average monthly water usage for all customers by year since 1993. Beginning in 2016, the average usage includes water usage for customers in the former SAWS DSP service area. The average usage for these customers is substantially less than the historical average usage for SAWS customers. Other noticeable effects on average usage include:

- A significant, persistent downward trend through the whole data series
- Volatility in the trend after 2004 due to weather variations
- Impacts of ongoing drought restrictions from 2013 through 2015



Weather fluctuations, from very rainy periods to drought conditions and related drought restrictions, factor into future water usage forecasts.

- The drought that began in 2011 lasted into 2015. The resulting drought restrictions during that period, brought customer usage levels in 2013 and 2014 to what was up until then historically low usage levels.
- Extremely wet weather conditions during 2015 served to end the drought but also dampened average customer demand to a new historic low level of 10,940 gallons.
- 2016 was another very wet year. This, combined with the consolidation of the SAWS DSP service areas, resulted in average customer usage of 10,948 gallons for 2016.
- Average customer usage increased to 11,024 gallons in 2017 as the year was drier than 2015 or 2016.
- Increased precipitation in 2018 over 2017 levels reduced the use per bill to 10,567 gallons but rebounded slightly in 2019 under drier conditions to 10,699. This shows the continued trend of lower usage, as 2019 was even drier than 2017 but produced a significantly lower usage per bill.
- Based on actual totals through August, the usage for 2020 is projected to be somewhat lower than 2019, around 10,491 gallons, as use per bill continues to trend downward and commercial customers have significantly reduced consumption in response to COVID-19 related pressures. This usage projection would have been even lower but for the fact that San Antonio had a hot, dry summer with less than two inches of rain during the months of June, July and August, which is approximately seven inches less than normal over this period.

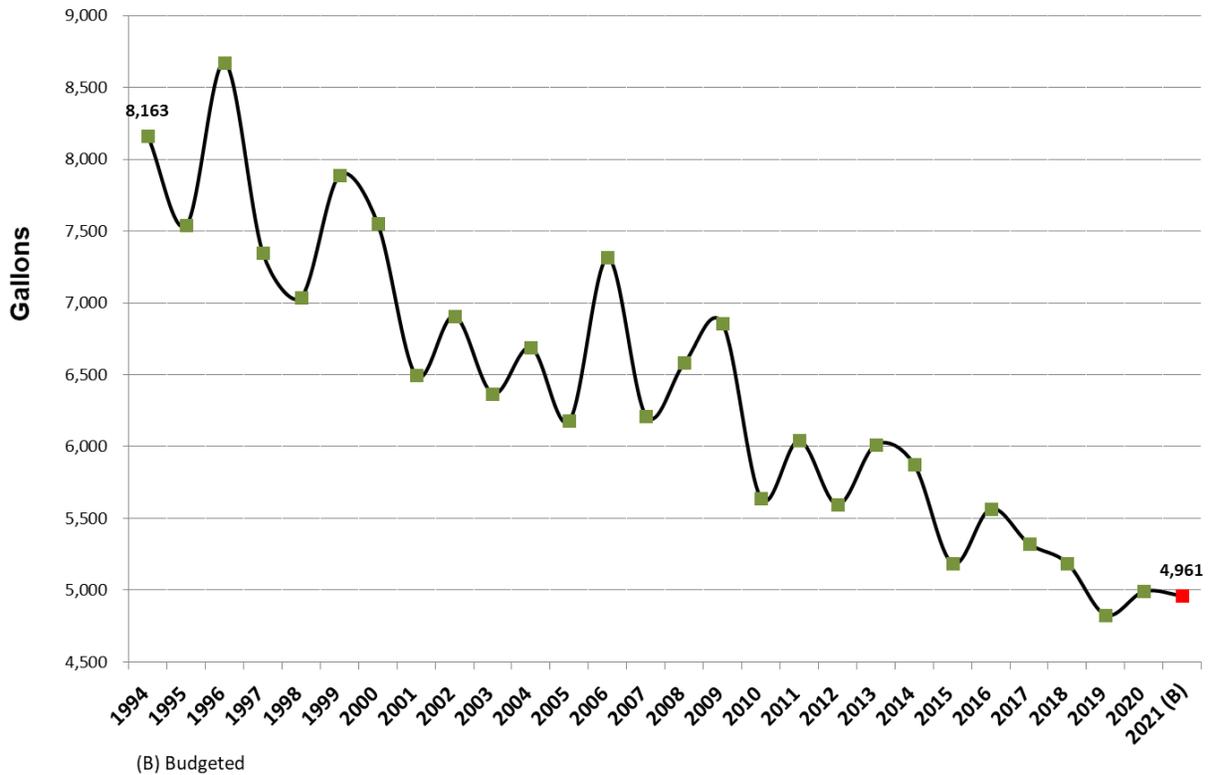
In order to minimize the financial risk to the system of overestimating revenues, 2021 budgeted revenues assume average customer use per bill of 10,253 gallons. This forecast allows for the possibility of either recurring wet conditions or drought restrictions, accounts for impacts of continuing conservation efforts and assumes that the negative economic impacts of COVID-19 continue to some degree through 2021. Consequently, the total budgeted water usage for 2021 is 65.1 billion gallons – 1.2% below the 65.9 billion budgeted in 2020.

Wastewater volumetric revenues are based on contributed flow estimated through water usage. For the commercial class, all water usage with the exception of water used for irrigation is subject to wastewater charges. For the residential class, the contributed flow is estimated through the average winter consumption (AWC), which is the average water usage during three consecutive billing periods beginning after November 15 and ending on or about March 15 of each year.

The AWC, as shown in the following chart, has declined persistently since 1994 as a result of indoor conservation efforts and increasing public awareness about the winter averaging method and measurement period. Due to higher than normal precipitation experienced during the end of 2018 and the first quarter of 2019, the 2019 AWC fell to 4,828 gallons, the lowest level since AWC has been tracked. The 2020 AWC returned to trend at 4,992 gallons. For 2021, SAWS projects the AWC will be 4,961 gallons, slightly higher than the recent historical trend, based on increased residential usage of water due to COVID-19 related trends, including a projected increase in winter demand associated with working and schooling from home over the AWC calculation period.

The AWC, as shown in the following chart, has declined persistently since 1994 as a result of indoor conservation efforts and increasing public awareness about the winter averaging method and measurement period. Due to higher than normal precipitation experienced during the end of 2018 and the first quarter of 2019, the 2019 AWC fell to 4,828 gallons, the lowest level since AWC has been tracked. The 2020 AWC returned to trend at 4,992 gallons. For 2021, SAWS projects the AWC will be 4,961 gallons, slightly higher than the recent historical trend, based on increased residential usage of water due to COVID-19 related trends, including increased working and schooling from home over the AWC calculation period.

**Average Winter Consumption
1994 - 2021**



OPERATING REVENUES

The 2021 revenue budget does not include any adjustments in rates for 2021.

WASTEWATER OPERATING REVENUES

Wastewater operating revenues recover the costs associated with the collection and treatment of wastewater. Sewer service charges consist of a fixed monthly service availability fee and volumetric charges based on each customer’s contributed wastewater flow. Residential contributed wastewater flow is estimated based upon a customer’s water usage during three consecutive billing periods between November 15th and March 15th. For all other customers, actual monthly water usage, excluding any amount used for irrigation (metered or assumed), is used to calculate contributed wastewater flow.

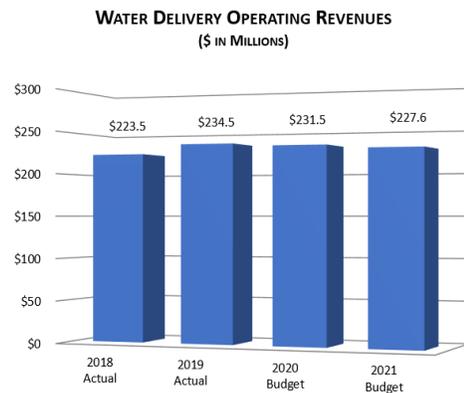
Wastewater operating revenues for 2021 are projected to consist primarily of \$272.7 million in sewer service charges and \$5.1 million in sewer surcharge revenues. Total metered wastewater revenues are forecasted to remain flat in 2021, reflecting unchanged rates and decreasing per-customer usage offsetting growth in new accounts.



WATER DELIVERY OPERATING REVENUES

Water delivery operating revenues recover the costs associated with the production, transmission and distribution of potable water to the customer primarily through monthly fixed and volumetric charges on each customer’s metered water usage. Total metered water sales are forecasted at \$227.6 million in 2021.

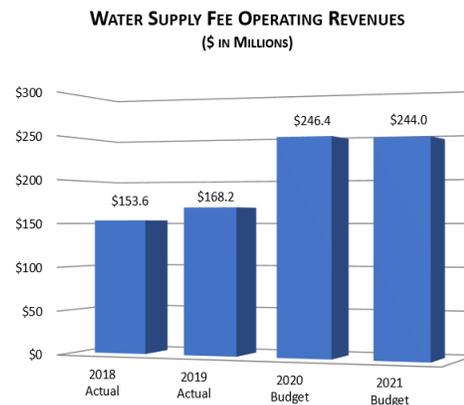
The 2021 revenue forecast assumes that water sales will total 65.1 billion gallons, which reflects a slight reduction from the 65.9 billion gallons budgeted for 2020. The slight reduction in assumed usage reflects a decline in projected water sales to commercial and industrial customers who have experienced impacts in their business operations due to COVID-19, which we forecast to extend into 2021 as well as a continuing decline in per customer usage. Offsetting these forecasted reductions to a large degree is anticipated customer growth.



WATER SUPPLY OPERATING REVENUES

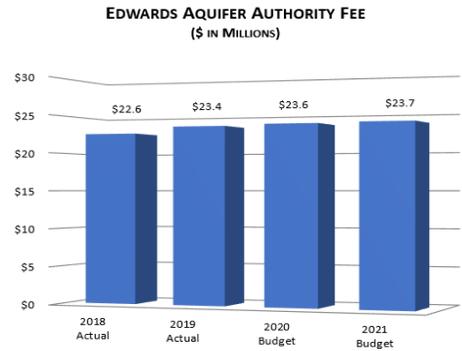
Water Supply operating revenues consist primarily of revenues from: the Water Supply Fee, Edwards Aquifer Authority pass-through fees and recycled water charges. Additionally, SAWS allocates a portion of water delivery charges to the Water Supply core business to fund conservation programs and receives fees from the City of San Antonio to provide services related to the City’s storm water program.

The Water Supply Fee was implemented in 2001 to support one of SAWS fundamental responsibilities: developing and procuring additional water supplies. The Water Supply Fee consists of volumetric charges assessed on customers’ meter water usage. Water Supply Fee revenues in 2021 are projected to be \$244.0 million,



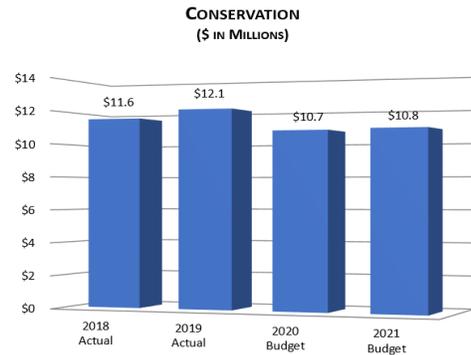
\$2.4 million less than projected in 2020, which reflects the same factors impacting water delivery revenues.

The Edwards Aquifer Authority (EAA) is statutorily empowered to impose an annual permit fee on all parties permitted to pump water from the Edwards Aquifer. The annual permit fee charged to SAWS is based on the number of acre-feet per year that SAWS is permitted to pump from the Edwards Aquifer and is recovered by SAWS through the assessment of a pass-through volumetric charge to its customers; the EAA Fee. The 2021 EAA Fee budgeted revenue is \$23.7 million.



Recycled water revenues are budgeted to be \$6.4 million in 2021. The forecasted receipt of \$3.7 million from the CPS Energy contract is projected to contribute 57.8% of recycled water revenues.

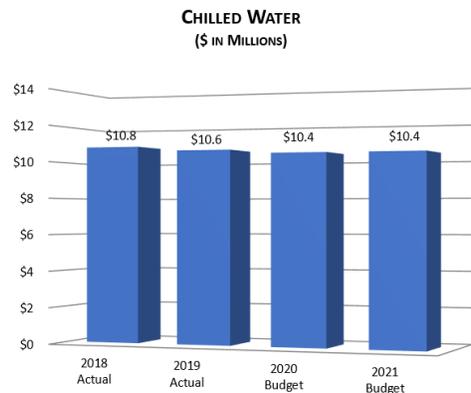
Conservation revenues are used to fund residential and commercial conservation programs. Conservation revenues for 2021 will be recovered from a portion of the residential water charges for monthly usage in excess of 7,481 gallons, a portion of non-residential monthly meter charges, and a portion of the irrigation revenues from all usage blocks. For 2021, conservation revenues are budgeted at \$10.8 million or 3.7% of total water supply operating revenues.



SAWS bills storm water charges to customers and provides certain other services related to the City of San Antonio’s Storm Water Program. The City of San Antonio will provide an estimated reimbursement to SAWS of \$5.2 million in 2021 to offset the cost of providing those services.

CHILLED WATER OPERATING REVENUES

SAWS provides chilled water for cooling purposes primarily to commercial customers located in downtown San Antonio and Port San Antonio. 2021 revenues are projected at \$10.4 million, the same as budgeted in 2020. Chilled water services comprise approximately 1.3% of total operating revenues.



NON-OPERATING REVENUE

2021 non-operating revenues, budgeted at \$8.5 million, are comprised of \$6.5 million in interest earnings on investments and a \$2.0 million federal subsidy to be received on previously issued Build America Bonds. Non-operating revenues account for 0.9% of the total sources of funds for 2021.

The average investment base is assumed to be \$1 billion and the yield on those investments is estimated to be 0.65% in 2021.

CAPITAL RECOVERY FEES

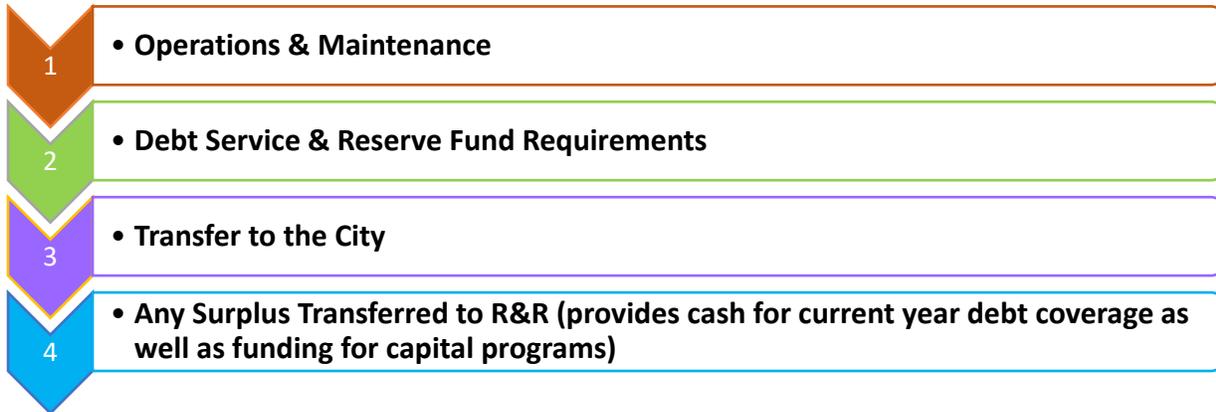
Capital recovery fees, also referred to as impact fees, are codified in Chapter 395 of the Texas Local Government Code and provide for the collection of fees to recover capital improvement costs necessary to serve new development. Through the city ordinances that formed SAWS, capital recovery fees are not considered to be included in Gross Revenues in the flow of funds. Instead, these fees are treated as capital contributions dedicated to fund eligible projects in the capital improvement program.

The collection of capital recovery fees varies from year to year based on the number of new customer connections and the fees charged. SAWS typically performs an impact fee study every five years. The most recent impact fee study was completed in May 2019. The \$100.1 million budgeted for capital recovery fees in 2021 reflects the changes in the fees as well as no observed decline in new unit construction or permit requests, despite the impact of coronavirus on other sectors of the economy.

On December 13, 2018, through Ordinance 2018-12-13-0996, the City Council adopted the City of San Antonio Fee Waiver Program, thereby replacing the Inner City Reinvestment/Infill Policy (ICRIP) as the primary mechanism for awarding SAWS impact fee waivers for economic development purposes. In November 2020 by ordinance, it is expected that the City Council will allocate a total amount of \$15 million over a five-year period from FY 2021 through FY 2025 at \$3 million per year. In the ordinance, it is further expected that the Council will acknowledge the intention of SAWS to allow unclaimed fee waivers from FY 2020 to carry forward allowing no more than a maximum of \$5 million in unclaimed impact fee waivers to carry forward into future fiscal years, as calculated annually based on the SAWS fiscal year. Adjustments to the carry forward amount and schedule require mutual agreement between the City and SAWS.

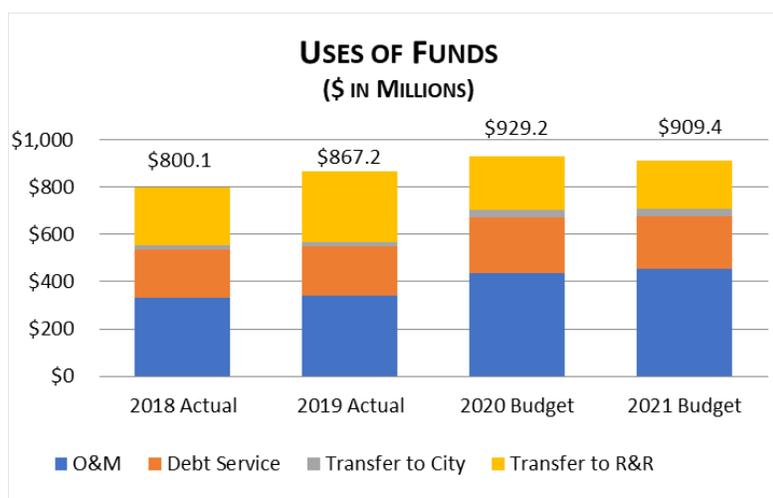
USES OF FUNDS

City of San Antonio, Texas Ordinance No. 75686 requires that Gross Revenues be pledged and appropriated to the extent required for the following uses and in the order of priority shown:



Uses of funds are summarized in the following table and chart:

<i>(dollars in thousands)</i>	2018 Actual	2019 Actual	2020 Budget	2021 Budget
USES OF FUNDS				
Operations and Maintenance	\$ 330,235	\$ 339,934	\$ 435,982	\$ 454,048
Revenue Bond Debt Requirement	201,288	202,211	225,327	218,422
Other Debt Service Requirement	3,921	4,879	10,574	4,932
Transfer to the City of San Antonio	18,287	21,918	31,681	30,931
Balance Available for:				
Renewal and Replacement Fund (Restricted)	90,992	110,001	108,083	102,779
Renewal and Replacement Fund (Unrestricted)	155,363	188,304	117,543	98,243
Total Uses of Funds	\$ 800,086	\$ 867,247	\$ 929,190	\$ 909,355



OPERATIONS AND MAINTENANCE EXPENSE

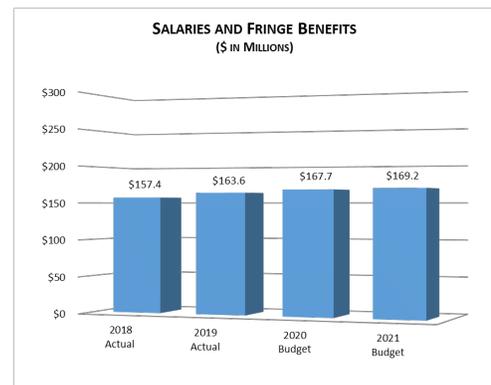
The cost to operate and maintain the system on a daily basis comprises the largest single use of SAWS' revenues. Approximately 50% of SAWS operating revenues are dedicated to supporting ongoing operations and maintenance. The 2021 budget for Operations and Maintenance (O&M) is \$454 million, which is an increase of 4.1% from the 2020 budget. As discussed previously, this increase is primarily attributable to the first full year of Vista Ridge Pipeline operations. For further discussion of the financial treatment of the Vista Ridge Pipeline Project, please refer to the Financial Policies section of this report.

SAWS operations and maintenance expenses are categorized into four major expenditure types: Salaries and Fringe Benefits, Contractual Services, Materials and Supplies, and Other Charges. Additionally, a portion of these costs are capitalized in direct support of SAWS Capital Improvement Program.

(\$ in thousands)	2018 Actual	2019 Actual	2020 Budget	2021 Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 157,375	\$ 163,647	\$ 167,672	\$ 169,198
Contractual Services	171,031	173,187	262,857	281,488
Materials and Supplies	23,485	26,469	24,974	25,348
Other Charges	9,956	7,374	11,979	9,934
O&M Before Capitalized Cost Total	\$ 361,847	\$ 370,677	\$ 467,482	\$ 485,968
Capitalized Cost	(31,612)	(30,743)	(31,500)	(31,920)
Total O&M	\$ 330,235	\$ 339,934	\$ 435,982	\$ 454,048
Capital Outlay	\$ 10,908	\$ 9,536	\$ 11,646	\$ 9,786

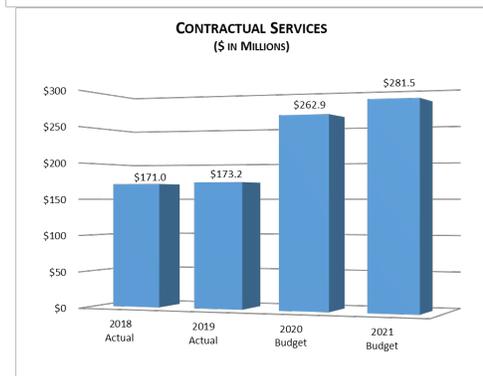
SALARIES AND FRINGE BENEFITS

Salaries and fringe benefits include wages and benefits for all full-time and part-time employees including: overtime, on-call pay, employees' insurance and retirement benefits, and contributions to a trust established to provide other post-employment benefits (OPEB). Total salary and fringe benefit costs for 2021 are estimated at \$169.2 million, or 34.8% of gross operation and maintenance expenditures (before capitalization) and reflect a 0.9% increase from prior year budget. The increased salary and fringe benefits are the result of projected additional medical insurance costs.



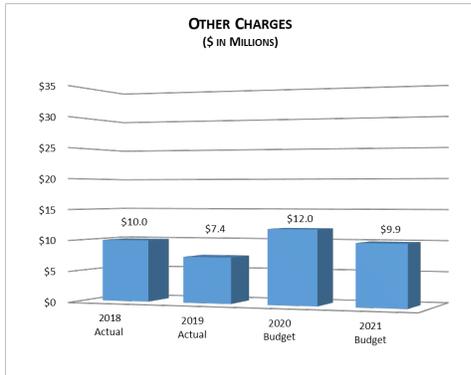
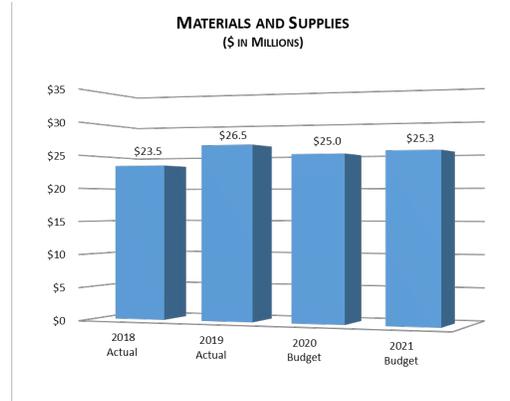
CONTRACTUAL SERVICES

Contractual Services expenditures represent operating services that are obtained through express or implied contracts. Total Contractual Services for 2021 are budgeted at \$281.5 million, which is 57.9% of the gross operation and maintenance expenditures (before capitalization) and reflect a net increase of \$18.8 million (7.1%) over the 2020 budget. The increase is attributable to \$26.2 million in added Vista Ridge water payment and utility costs due to the first full year of Vista Ridge Pipeline operations in 2021.



MATERIALS AND SUPPLIES

The Materials and Supplies budget of \$25.3 million is 5.2% of gross operation and maintenance expenditures and reflects an increase of 1.5% compared to the 2020 budget. The projected change is due in part to the additional chemicals needed for the Agua Vista Station to receive and treat water from the Vista Ridge Pipeline Project for its first full year of operations in 2021.

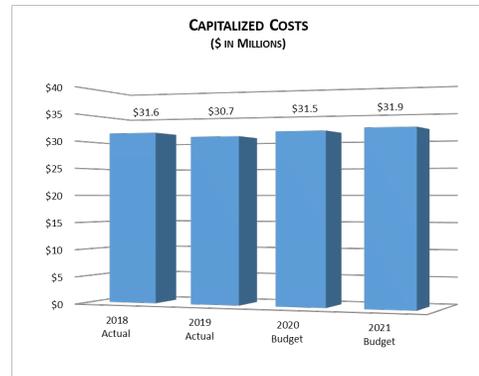


OTHER CHARGES

The Other Charges category includes property, casualty and workers’ compensation costs, retirees’ healthcare costs, and bank charges. The 2021 costs are estimated at \$9.9 million, or 2.0% of gross operation and maintenance expenditures, and reflect a 17.1% decrease from the 2020 budget due to a projected reduction in retirees’ medical insurance costs in 2021.

CAPITALIZED COSTS

Operating and maintenance costs that support functions directly related to capital improvements are reflected as reductions to the gross Operations and Maintenance costs and are funded as part of SAWS’ Capital Improvement Program (CIP). In 2021, Capitalized Costs are estimated at \$31.9 million, or 6.6% of gross operation and maintenance expenditures.



OPERATION AND MAINTENANCE SUMMARY BY EXPENSE CLASSIFICATION

(\$ in thousands)	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Salaries and Fringe Benefits				
511100 Salaries	\$ 99,819	\$ 104,445	\$ 110,690	\$ 110,427
511140 Overtime Pay	7,797	7,910	5,758	5,888
511150 On-Call Pay	686	787	678	727
511160 Employee Insurance	18,751	17,327	17,507	18,959
511162 Retirement	20,763	22,900	23,258	23,126
511164 Unused Sick Leave Buyback	18	20	70	70
511166 Personal Leave Buyback	966	976	950	950
511168 Accrued Vacation leave	1,075	1,682	1,200	1,500
511170 Incentive Pay	-	100	61	51
511175 Other Post Employment Benefits	7,500	7,500	7,500	7,500
Salaries and Fringe Benefits Total	157,375	163,647	167,672	169,198
Contractual Services				
511210 Operating Expense	2,302	2,030	1,531	1,596
511211 Rental of Facilities	279	194	275	246
511212 Alarm and Security	1,786	2,141	1,939	2,189
511214 Uniforms and Shoe Allowance	415	379	442	445
511216 Catering Svcs and Luncheons	130	133	123	87
511218 Project Agua Assistance	-	-	400	400
511219 Program Rebates	3,327	3,098	3,625	3,519
511220 Maintenance Expense	19,566	20,912	20,291	20,539
511221 Street Cut Permit Admin Fee	873	686	841	841
511222 St Pave/Repair Fee	1,223	1,319	1,801	1,801
511224 Auto and Equip. Maintenance Parts	1,876	1,972	1,563	1,563
511225 Damage Repair	142	108	150	125
511230 Equipment Rental Charges	477	1,776	308	394
511240 Travel	132	214	224	58
511245 Training	596	721	668	518
511247 Conferences	56	42	108	36
511250 Memberships and Subscriptions	577	509	500	370
511260 Utilities	30,113	28,284	39,672	40,842
511261 Water Options	37,937	45,765	110,945	134,918
511265 Ground Water District Pay	23,659	23,615	23,298	24,255
511270 Mail and Parcel Post	2,008	2,075	2,288	2,238
511280 Telemetry Charges	-	2	-	3
511310 Educational Assistance	81	100	77	77
511312 Contractual Prof Svcs	30,023	23,011	37,245	28,689
511313 Inspect and Assessment Fees	2,117	2,178	2,469	2,496
511315 Temporary Employees	1,599	1,482	740	607
511316 Medical Services	-	-	-	136
511320 Legal Services	2,093	1,793	2,274	2,264
511370 Communications	1,808	1,473	1,674	1,549
511381 Software and Hardware Maintenance	5,836	7,175	7,386	8,687
Contractual Services Total	171,031	173,187	262,857	281,488

OPERATION AND MAINTENANCE SUMMARY BY EXPENSE CLASSIFICATION (continued)

(\$ in thousands)	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Materials and Supplies				
511410 Small Tools	740	802	688	704
511417 Copy and Printing Expense	24	14	23	17
511420 Operating Materials	2,288	2,310	2,421	2,337
511421 Heating Fuel	14	34	15	15
511422 Chemicals	6,968	7,477	8,931	9,705
511425 Education of School Children	30	14	30	20
511426 Public Awareness-WQEE	-	-	1	-
511427 Enforcement	-	-	5	-
511430 Maintenance Materials	9,273	11,429	8,889	9,335
511440 Safety Materials and Supplies	923	1,086	869	872
511441 Inventory Variances	(60)	31	-	-
511450 Tires and Tubes	563	623	550	550
511451 Motor Fuel and Lubricants	2,722	2,649	2,552	1,793
Materials and Supplies Total	23,485	26,469	24,974	25,348
Other Charges				
511510 Judgements and Claims	(459)	(1,006)	725	650
511511 AL/GL Claims - Cont. Liab.	292	326	330	330
511520 Bank Charges	7	20	125	124
511525 Cash Short/(Over)	(3)	-	-	-
511530 Employee Relations	151	163	209	156
511540 Retiree Insurance	7,808	6,003	8,241	6,324
511570 Casualty Insurance	855	993	1,139	1,140
511580 Unemployment Compensation	78	62	80	80
511590 Workers Comp Medical	1,227	813	1,130	1,130
Other Charges Total	9,956	7,374	11,979	9,934
O&M Before Capitalized Cost Total	361,847	370,677	467,482	485,968
Capitalized Cost	(31,612)	(30,743)	(31,500)	(31,920)
Grand Total	\$ 330,235	\$ 339,934	\$ 435,982	\$ 454,048

REVENUE BOND DEBT SERVICE REQUIREMENT

The bonded debt service requirement is comprised of bond interest costs and the retirement of a certain portion of bond principal. This requirement is projected based on maturity schedules of existing debt and 30-year level debt service on new debt necessary to support the capital program. The 2021 debt service schedules assume the issuance of an additional \$304.7 million of bonds in 2021 to provide funds for the 2021 CIP. This debt is assumed to be issued as a Senior Lien Water System Revenue Bond. The amount necessary to fulfill total bonded debt service requirements in 2021 on existing and new bonded debt is projected to be \$218.4 million, which is 3.1% less than the 2020 budgeted level. Additional discussion of SAWS debt program is included in the Debt Service section of this report.

OTHER DEBT EXPENSE

SAWS expects to pay approximately \$4.9 million in debt related expenses in 2021. These expenses include interest on commercial paper and the following fees: remarketing agent, credit liquidity facility, rating agency, and paying agent. Remarketing agents are investment-banking firms responsible for the marketing and remarketing of variable rate obligations to investors as they mature. The credit liquidity facility provider commits to purchasing the maturing variable rate obligations should the remarketing agent be unable to remarket the variable rate obligations.

TRANSFER TO THE CITY OF SAN ANTONIO

Pursuant to City Ordinance No. 75686, SAWS is required to transfer to the General Fund of the City up to 5% of the gross revenues as defined by ordinance. Certain revenues are exempt from gross revenues for purposes of calculating the transfer. The actual percentage contributed is determined by City Council. Since the inception of SAWS in 1992, the transfer to the City had been set at 2.7% of non-exempt gross revenues. After consultation with SAWS, the City increased this percentage to 4.0% in late 2019. \$31.7 million has been budgeted for this transfer in 2021 reflecting the increased amount, which is \$12.4 million higher than the \$19.3 million budgeted in 2020.

BALANCE AVAILABLE FOR TRANSFER TO RENEWAL AND REPLACEMENT FUND

After meeting all other requirements of system revenues including operations and maintenance expenses, debt service, and transfer to the City's General Fund, \$201.1 million is estimated to be available for transfer to the Renewal and Replacement Fund (R&R) of which \$102.8 million is restricted primarily for use associated with SAWS Capital Improvement Program. Unrestricted R&R can be used for the purpose of funding improvements, extensions, additions, replacements, or other capital expenditures (including capital outlay) related to the System and for any other lawful purpose. At a minimum, SAWS is required to transfer to this fund an amount equal to the amount that is transferred to the City's General Fund each year.

Capital Outlay consists of expenditures for certain capital assets not included in SAWS Capital Improvement Program. These assets have an individual cost of \$5,000 or more and a useful life greater than one year but less than fifteen years. This includes machinery and equipment, computer hardware, software systems, laboratory equipment, vehicles, heavy equipment, and miscellaneous equipment. The Capital Outlay program is based on priorities established by executive management. The capital outlay program for 2021 consists of \$9.8 million in planned capital expenditures meeting the above criteria.

The following table includes actual expenditures for 2018 and 2019, budgeted expenditures for 2020, and planned expenditures in 2021 for the capital outlay program:

(\$ in thousands)	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Land, Land Rights, Water Permits	\$ -	\$ 204	\$ -	\$ -
Structures and Improvements	264	493	-	-
Pumping Equipment	191	951	-	-
Machinery and Equipment	-	-	250	250
Computer Equipment	2,183	1,687	2,100	2,103
Software Systems	149	197	285	35
Lab Equipment	160	90	200	200
Miscellaneous Equipment	1,076	535	3,423	1,681
Automobiles and Trucks	3,781	4,960	2,916	3,170
Heavy Equipment	3,084	419	2,347	2,347
Light Equipment	21	-	125	-
Grand Total	\$ 10,908	\$ 9,536	\$ 11,646	\$ 9,786

After funding of \$9.8 million for 2021 capital outlay expenditures, \$88.5 million in unrestricted funds is expected to be added to the R&R Fund in 2021. These unrestricted funds are expected to be utilized to provide pay-as-you-go funding to support the SAWS Capital Improvement Program in 2022 and beyond.

DEBT SERVICE

San Antonio Water System utilizes both long-term and short-term debt to finance the Capital Improvements Program (CIP). SAWS' currently outstanding revenue bonds consist of fixed-rate and variable rate obligations. Commercial paper provides SAWS with flexibility and efficiency in the timing and amount of debt issued. The commercial paper program and variable rate debt provides a hedge to partially offset the variable rate nature of SAWS' investment portfolio.

REVENUE BONDS

As of December 31, 2020, SAWS will have Senior and Junior Lien Water System Revenue Bonds outstanding.

- **Senior Lien Water System Revenue Bonds** - comprised of Series 2009B, Series 2010B, Series 2011, Series 2012, and Series 2012A outstanding in the amount of \$321,950,000 as of December 31, 2020 and collateralized by a senior lien and pledge of the gross revenues of the System after deducting and paying the current expenses of operation and maintenance of the System and maintaining an operating reserve for operating and maintenance expenses.
- **Junior Lien Water System Revenue Bonds** - comprised of 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 2015A, Series 2015B (NO RESERVE FUND), Series 2016A (NO RESERVE FUND), Taxable Series 2016B (NO RESERVE FUND), Series 2016C (NO RESERVE FUND), Series 2016D, Series 2016E, Series 2017A (NO RESERVE FUND), Series 2018A (NO RESERVE FUND), Series 2018B, Series 2019B, Series 2019C (NO RESEVE FUND), Series 2020A (NO RESERVE FUND), Series 2020B, and Series 2020C (NO RESERVE FUND) outstanding in the amount of \$2,072,960,000 as of December 31, 2020 and collateralized by a junior lien and pledge of the gross revenues of the System after deducting and paying the current expenses of operation and maintenance of the System, maintaining an operating reserve for operating and maintenance expenses, and paying the debt service on senior lien debt.
- **Junior Lien Water System Variable Rate Revenue Bonds** – comprised of the Series 2013F (NO RESERVE FUND) Bonds (the "Series 2013F Bonds"), the Series 2014B (NO RESERVE FUND) Bonds (the "Series 2014B

Bonds”), and the Series 2019A (NO RESERVE FUND) Bonds (the “Series 2019A Bonds”) (together the “Bonds”). The Bonds were issued as multi-modal variable rate bonds, with the Series 2013F Bonds and Series 2014B Bonds initially issued in a Securities Industry and Financial Markets Association (SIFMA) Index Mode for a three-year term. The Series 2013 F Bonds and Series 2014B Bonds have been remarketed into a Term Mode for a five-year period. The Series 2013F Bonds were remarketed at a fixed interest rate of 2.00%, yielding 1.63% for a five-year period ending October 31, 2021 and the Series 2014B Bonds were remarketed at a fixed interest rate of 2.00%, yielding 1.80% for a five-year period ending October 31, 2022. The Series 2019A Bonds were issued in a Term Mode at a fixed interest rate of 2.65%, yielding 2.45% through April 30, 2024. Total Junior Lien Variable Rate Revenue Bonds outstanding as of December 31, 2020 was \$364,865,000. The debt service for the variable rate bonds is collateralized by a junior lien and pledge of the gross revenues of the System after deducting and paying the current expenses of operation and maintenance of the System, maintaining an operating reserve for operating and maintenance expenses, and paying the debt service on senior lien debt.

- Subordinate Lien Revenue and Refunding Bonds - Interest Rate Hedge Agreement (Swap)** - In 2003, \$122.5 million of “City of San Antonio, Texas Water System Subordinate Lien Revenue and Refunding Bonds, Series 2003-A and 2003-B” (the “Subordinate Lien Obligations”) were issued in a weekly interest rate mode. To hedge against changes in interest expenses, the City of San Antonio, through SAWS, entered into an interest rate hedge agreement (the “Swap Agreement”) under which SAWS must pay a fixed rate of 4.18% and receive a variable rate which corresponds to the Municipal Swap Index published by SIFMA. The rates are applied to a specified notional amount which matches the amortization schedule of the principal amount of the Subordinate Lien Obligations. The payments under this obligation are collateralized by a subordinate lien and pledge of the gross revenues of the System after deducting and paying the current expenses of operation and maintenance of the system, maintaining an operating reserve for operating and maintenance expenses, and paying debt service on senior lien and junior lien debt.

In 2008, SAWS issued a Notice of Partial Redemption for \$110.6 million of the Subordinate Lien Obligations due to unfavorable market conditions relating to variable rate demand obligations, resulting in the related interest rate hedge agreement not providing an effective hedge against short term interest rate movements applicable to the related obligations. The Subordinate Lien Obligations were redeemed with commercial paper notes. At December 31, 2020, \$73,060,000 of the commercial paper notes outstanding are hedged by the Swap Agreement.

SAWS still considers the Swap Agreement to be a valuable variable rate management tool within its debt portfolio. The obligation to pay the fixed rate of 4.18% on the notional amount outstanding remains and is included in the 2021 budgeted debt service requirements of SAWS at the original principal amortization of the Subordinate Lien Obligations. Principal amortization calls for \$4,240,000 of the commercial paper notes associated with the Subordinate Lien Obligations be redeemed on May 1, 2021, bringing the outstanding balance to \$68,820,000.

RESERVE FUND REQUIREMENT

SAWS’ bond ordinance requires the maintenance of a reserve fund for the payment of senior lien and junior lien debt obligations in an amount equal to 100% of the maximum annual debt service requirement for the senior lien obligations and 100% of the average annual debt service requirement for the junior lien obligations requiring a reserve fund. The ordinance provides for the use of cash, debt, and surety policies or a combination thereof, to satisfy the reserve fund requirement. The debt service schedules for the bonds anticipated to be issued in 2020 assumes any required increase in the reserve fund will be funded with proceeds from bonds issued.

COMMERCIAL PAPER

SAWS also maintains a commercial paper program that is used to provide funds for the interim financing of a portion of the capital improvements program. The San Antonio City Council has authorized a commercial paper program of up to \$500 million (the “CP Program”). The CP Program provides for the issuance of subseries of notes,

currently designated as Subseries A-1, Subseries A-2, Series B and Series C. The CP Program is supported by two revolving credit agreements, one with JPMorgan Chase Bank, N.A. (the "Series A Agreement"), and the other with Wells Fargo Bank, N.A (the "Series C Agreement"). JPMorgan Chase Banks, N.A. currently supports \$400 million of Series A CP notes which extends through October 4, 2023. The second revolving credit agreement with Wells Fargo Bank, N.A, supports \$100 million in Series C CP notes, and expires in accordance with its term on January 8, 2021. Capacity under the Series C Agreement is currently fully consumed by a direct placement note with Wells Fargo with a maturity date of January 8, 2021. The Subseries A-1 CP notes are publicly marketed with the Subseries A-2 Notes placed directly with JPMorgan Chase Bank, N.A. under a note purchase agreement.

The 2021 Budget assumes approximately \$403 million of commercial paper is outstanding relating to the funding of capital improvement projects by the end of 2021. As stated in the "Interest Rate Hedge Agreement (Swap)" section herein, by the end of 2021, an additional \$68.8 million of the commercial paper program will be attributable to the redemption of the Subordinate Lien Obligations. The 2021 Budget assumes that the interest to be paid on the tax exempt commercial paper (TECP) attributable to the redemption of the Subordinate Lien Obligations will be offset in its entirety by the amount to be received under the variable rate leg of the Swap. SAWS' capital financing plan provides for the refunding of commercial paper as the outstanding balance trends toward the upper limit of the Agreement to ensure the outstanding balance does not exceed the revolving line of credit amount.

BOND AND COMMERCIAL PAPER RATINGS

In July 2020, SAWS' senior lien and junior lien revenue bond credit ratings were reaffirmed by the three major rating agencies. SAWS' credit ratings are as follows:

	Senior Lien	Junior Lien	Commercial Paper	
			Subseries A-1	Series B
Fitch Ratings	AA+	AA	F1+	F1+
Moody's Investors Service, Inc.	Aa1	Aa2	P-1	P-1
S&P Global Ratings	AA+	AA	A-1+	A-1+

The high quality ratings reflects SAWS' large, diverse and growing service area, sound financial performance, long term planning in water supply and infrastructure needs, and competitive water and sewer rates.

DEBT COVERAGE

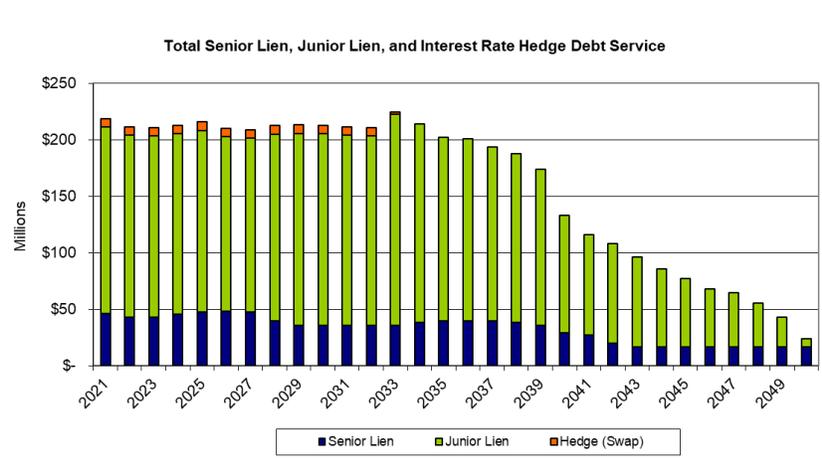
SAWS is required by ordinance to maintain a debt coverage ratio of 1.25 times the annual debt service on outstanding senior lien debt. The 2021 Operating Budget projects an estimated 2021 Senior Lien Debt Coverage ratio of 7.58 times and 2021 Total Debt Coverage ratio of 1.60 times.

DEBT COVERAGE CALCULATION <i>(\$ in thousands)</i>	
Total Sources of Funds	\$ 909,355
Less Revenues from:	
CPS Energy Contract	3,709
Capital Recovery Fees	100,074
Transfer from Renewal & Replacement Fund	-
Interest on Project Funds	1,300
Gross Revenues as defined by Ordinance No. 75686	\$ 804,272
Less: Operations & Maintenance	454,048
Pledged Revenues as defined by Ordinance No. 75686	\$ 350,224
2021 Senior Lien Debt Service Requirement	\$ 46,203
2021 Senior Lien Debt Coverage Ratio	<u>7.58 x</u>
Maximum Senior Lien Debt Service Requirement (Year 2026)	\$ 48,187
Maximum Senior Lien Debt Coverage Ratio	<u>7.27 x</u>
2021 Total Debt Service Requirement	\$ 218,422
2021 Total Debt Coverage Ratio	<u>1.60 x</u>
Maximum Total Debt Service Requirement (Year 2033)	\$ 224,809
Maximum Total Debt Coverage Ratio	<u>1.56 x</u>

BUDGETED REVENUE AND REFUNDING BONDS DEBT SERVICE SCHEDULES

Fiscal Year December 31.	Senior Lien	Junior Lien	Interest Rate Hedge (Swap)	Total Bonded Service
2021	\$ 46,202,808	\$ 164,913,425	\$ 7,305,753	\$ 218,421,985
2022	42,753,943	161,192,929	7,324,754	211,271,626
2023	42,799,203	160,894,129	7,341,992	211,035,324
2024	45,286,089	160,393,734	7,358,854	213,038,677
2025	47,322,066	161,008,708	7,379,994	215,710,767
2026	48,187,498	154,515,669	7,396,519	210,099,686
2027	47,791,909	153,504,127	7,416,555	208,712,590
2028	39,810,535	165,305,416	7,439,543	212,555,494
2029	35,923,684	169,751,696	7,461,594	213,136,975
2030	35,849,283	169,340,941	7,485,623	212,675,848
2031	35,744,994	168,478,592	7,509,405	211,732,991
2032	35,651,536	167,865,900	7,534,120	211,051,557
2033	35,571,483	186,722,993	2,514,211	224,808,687
2034	38,498,022	175,454,406	-	213,952,428
2035	39,873,197	162,652,992	-	202,526,189
2036	39,698,111	161,384,680	-	201,082,791
2037	39,498,317	154,203,097	-	193,701,413
2038	38,316,217	149,078,550	-	187,394,767
2039	35,871,287	138,048,367	-	173,919,654
2040	28,819,327	104,004,650	-	132,823,976
2041	26,862,407	88,842,783	-	115,705,190
2042	20,012,487	88,002,828	-	108,015,315
2043	16,580,075	79,472,341	-	96,052,416
2044	16,575,600	68,916,428	-	85,492,028
2045	16,575,025	60,656,024	-	77,231,049
2046	16,577,650	51,185,603	-	67,763,253
2047	16,572,950	47,725,964	-	64,298,914
2048	16,570,400	38,811,791	-	55,382,191
2049	16,564,388	26,428,439	-	42,992,827
2050	16,402,100	7,609,154	-	24,011,254
	\$ 978,762,590	\$ 3,746,366,357	\$ 91,468,918	\$ 4,816,597,865

Amounts represent transfers to the Debt Service Fund for existing and projected debt, including obligations under the 2003 swap agreement.



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ORGANIZATION AND STAFFING

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ORGANIZATION AND STAFFING

OPERATIONS AND MAINTENANCE SUMMARY BY DEPARTMENT

(\$ in thousands)	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Board of Trustees and Pres/CEO Group				
Office of the President-CEO	\$ 1,138	\$ 1,189	\$ 1,122	\$ 1,151
Board of Trustees	61	58	64	63
Board of Trustees Support	298	270	335	313
Continuous Improvement and Innovation	511	478	439	496
Internal Audit	565	580	592	692
Board of Trustees and Pres/CEO Group Total	2,573	2,575	2,552	2,715
Communications and External Affairs				
Communications Administration	617	593	621	565
Communications	1,466	1,459	1,601	1,637
Conservation Department	5,401	5,171	5,793	5,800
External Affairs	2,091	2,178	2,277	2,309
Communications and External Affairs Total	9,575	9,401	10,292	10,311
Customer Experience				
Customer Service Administration	646	416	540	500
Advanced Metering Infrastructure (AMI)	13	225	613	397
Billing and Customer Care	7,127	7,029	7,432	7,553
Emergency Operations Center	1,327	1,467	1,453	1,506
Field Operations	9,576	10,187	10,303	10,505
Performance Analysis and Training	922	776	734	878
Customer Experience Total	19,611	20,100	21,075	21,339
Distribution and Collection				
Office of the VP - Distribution and Collection	637	1,024	1,133	1,295
Construction and Maintenance	22,039	21,451	24,039	18,437
Distribution and Collection Support Services	3,632	4,210	7,496	7,984
Eastern Service Centers	10,800	11,025	10,915	11,078
Western Service Centers	10,974	10,762	9,861	9,899
Distribution and Collection Total	48,082	48,472	53,444	48,693
Engineering and Construction				
Office of the VP - Engineering and Construction	1,207	1,236	1,227	1,154
Construction	6,015	6,419	6,907	7,060
Development	3,890	4,617	6,858	6,671
Infrastructure and Resource Optimization	-	-	-	146
Pipelines	3,795	3,984	4,340	4,444
Plants and Major Projects	1,846	1,775	1,919	2,090
Central Water Integration Pipeline Project	378	619	624	356
Engineering and Construction Total	17,131	18,650	21,875	21,921
Financial Services				
Office of the CFO	432	467	456	459
Accounting and Business Planning	2,706	3,034	3,195	3,016
Purchasing and Supply	1,782	2,097	1,986	2,004
Treasury	829	882	1,083	1,166
Financial Services Total	5,749	6,480	6,720	6,645
Human Resources				
Human Resources	4,168	4,725	4,743	4,660
Risk Management	2,593	2,814	2,253	2,375
Safety and Environmental Health	-	-	1,076	916
Human Resources Total	6,761	7,539	8,072	7,951

OPERATIONS AND MAINTENANCE SUMMARY BY DEPARTMENT (CONTINUED)

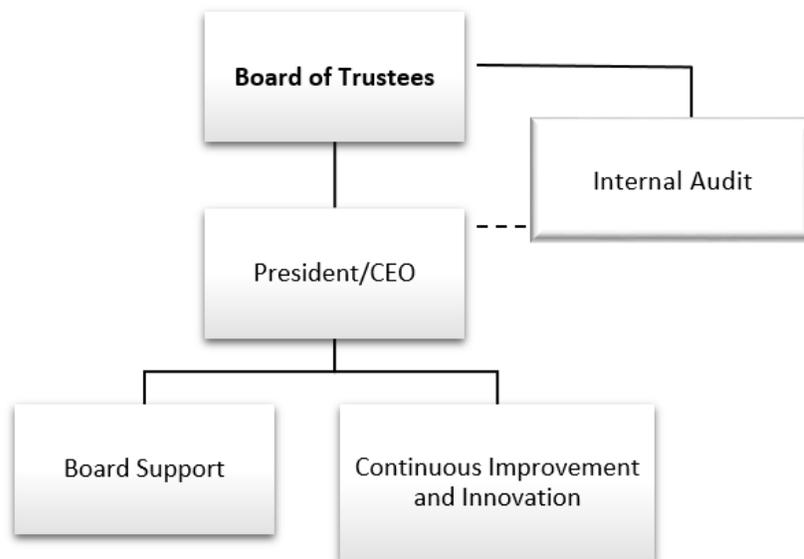
(\$ in thousands)	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Information Systems				
Office of the CIO	1,194	1,518	2,058	2,042
Control System Programming	991	535	570	777
Enterprise Solutions	5,525	7,323	8,005	8,494
Information Security	-	742	1,058	912
IT Infrastructure & Operations	7,158	6,855	7,416	7,700
Program Mgmt - IT Support	1,440	-	-	-
Shared Services	6,350	6,492	6,688	7,794
Information Systems Total	22,658	23,465	25,795	27,719
Legal				
Contracting	1,468	1,500	1,687	1,792
Corporate Real Estate	545	590	590	685
Legal Department	4,552	4,164	4,640	4,858
Legal Total	6,565	6,254	6,917	7,335
Operations				
Ofc of Chief Operating Officer	980	1,176	931	988
Sr. VP Engineering and Construction	-	28	-	-
Operations Total	980	1,204	931	988
Operations Support				
Fleet and Facilities	23,465	25,461	22,654	22,918
Security	3,329	3,641	4,436	3,828
Operations Support Total	26,794	29,102	27,090	26,746
Production and Treatment				
Office of the VP - Production and Treatment	540	497	454	530
Ofc of Director - Production and Treatment Operati	279	81	67	66
Production Department	35,819	36,244	42,625	42,924
Treatment Maintenance Management	14,047	17,696	15,346	15,691
Treatment Operations Management	21,231	22,462	21,374	22,439
Production and Treatment Total	71,916	76,980	79,866	81,650
Sewer System Improvements				
Capacity Assessment	1,321	1,285	1,010	1,010
Capacity Mgt O&M (CMOM)	2,870	1,953	4,510	4,284
Program Administration	5,833	3,647	3,406	2,676
Structural Sewer Assessment	957	2,401	3,910	2,910
Sewer System Improvements Total	10,981	9,286	12,836	10,880
Water Resources and Governmental Relations				
Environmental Laboratory Services	2,284	2,396	2,566	2,630
Governmental Relations	2,273	1,800	2,168	1,356
Resource Protection & Compliance	8,861	8,357	9,045	8,628
Vista Ridge	6,562	874	77,738	103,702
Water Resources	63,680	70,388	66,597	67,611
Water Resources and Governmental Relations Total	83,660	83,815	158,114	183,927
Other Requirements	28,811	27,353	31,903	27,148
O&M Before Capitalized Cost Total	361,847	370,677	467,482	485,968
Capitalized Cost	(31,612)	(30,743)	(31,500)	(31,920)
Grand Total	\$ 330,235	\$ 339,934	\$ 435,982	\$ 454,048

OPERATIONS AND MAINTENANCE SUMMARIES BY GROUP

BOARD OF TRUSTEES AND PRESIDENT/CEO

The Board of Trustees and President /CEO Group provide the overall leadership, management, direction and policy implementation for the San Antonio Water System. It consists of the Board of Trustees, Office of the President/CEO, Board support functions, and the Internal Audit function.

- **Board of Trustees** – SAWS is governed by the San Antonio Water System Board of Trustees. The Board consists of the Mayor and six members appointed by the City Council. The Board of Trustees is responsible for setting the overall policy direction of the system.
- **President/CEO** – The President/CEO is responsible and accountable for leading and managing the San Antonio Water System, including the implementation of the policy goals set by the Board of Trustees and City Council. The President/CEO sets the vision and works alongside employees to achieve SAWS’ mission and goals.
- **Internal Audit** – The Internal Audit Office provides independent and objective assurance and consulting services designed to add value and improve SAWS’ operations. Internal Audit administratively reports to the President/CEO and functionally reports to the Board of Trustees.
- **Continuous Improvement and Innovation** – Conducts business performance reviews and process analysis across the organization to streamline operations, maximizes budgetary resources, promotes efficiencies, enhances customer service and implements innovative management practices.



BOARD OF TRUSTEES AND PRESIDENT/CEO

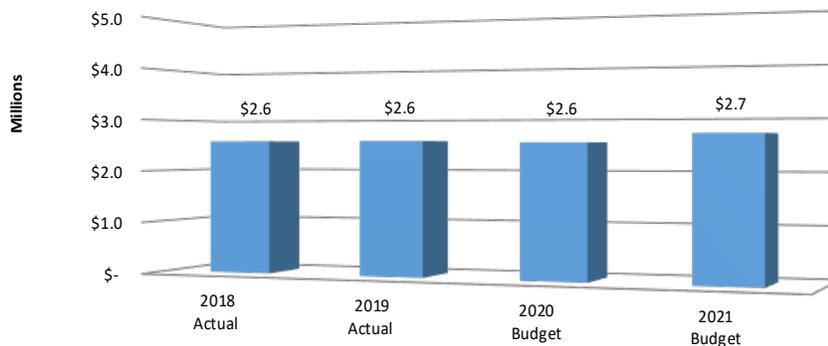
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Expenditures by Type	2018 Actual	2019 Actual	2020 Budget	2021 Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 2,324	\$ 2,440	\$ 2,301	\$ 2,450
Contractual Services	241	128	241	257
Materials and Supplies	8	7	10	8
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 2,573	\$ 2,575	\$ 2,552	\$ 2,715
Capitalized Cost	-	-	-	-
Total O&M	\$ 2,573	\$ 2,575	\$ 2,552	\$ 2,715
Capital Outlay	\$ 1	\$ -	\$ -	\$ -

Expenditures by Department	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Office of the President-CEO	1,138	1,189	1,122	1,151
Board of Trustees	61	58	64	63
Board of Trustees Support	298	270	335	313
Continuous Improvement and Innovation	511	478	439	496
Internal Audit	565	580	592	692
O&M Before Capitalized Cost Total	\$ 2,573	\$ 2,575	\$ 2,552	\$ 2,715
Capitalized Cost	-	-	-	-
Grand Total	\$ 2,573	\$ 2,575	\$ 2,552	\$ 2,715

Full-time Equivalent Positions	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Office of the President-CEO	3.0	3.0	3.0	3.0
Board of Trustees			-	-
Board of Trustees Support	2.0	2.0	2.0	2.0
Continuous Improvement and Innovation	5.5	4.5	4.5	4.0
Internal Audit	4.0	4.0	4.0	5.0
Total Full-Time Equivalent Positions	14.5	13.5	13.5	14.0

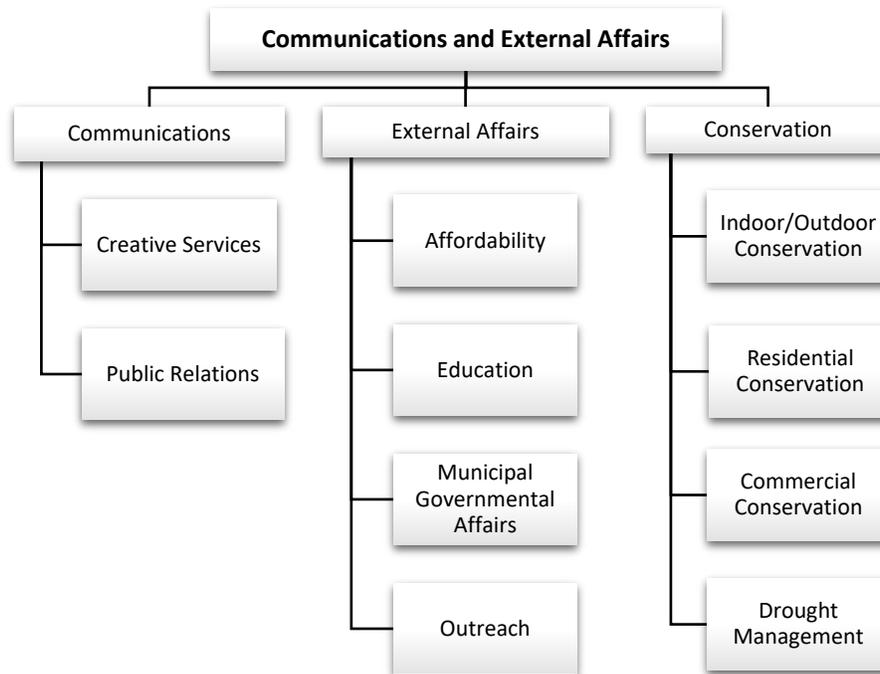
BOARD OF TRUSTEES AND PRESIDENT/CEO



COMMUNICATIONS AND EXTERNAL AFFAIRS

The Communications and External Affairs Group engages in proactive strategic outreach and partnerships to inform and involve SAWS 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.
 - *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 San Antonio City Council members. Implements the SAWS Affordability Program that aids economically disadvantaged customers so that they have access to water and sewer services. Develops and conducts adult and youth educational programs to inform and promote water awareness in our community.
- **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 – water not used. To help keep rates affordable, SAWS aggressively promotes efficient commercial and residential water use through education, outreach, incentives and drought ordinance rules.



COMMUNICATIONS AND EXTERNAL AFFAIRS

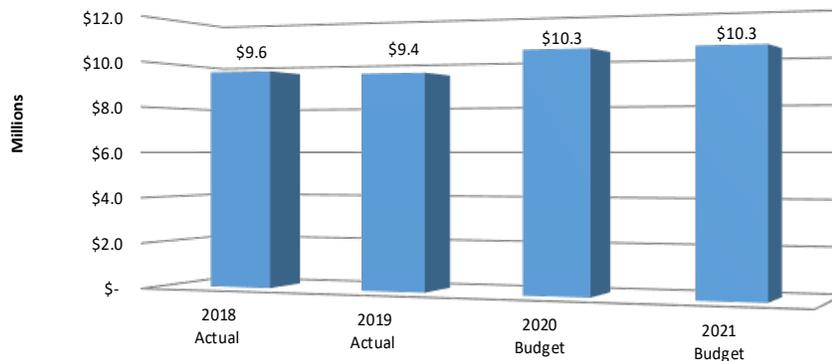
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Expenditures by Type	2018 Actual	2019 Actual	2020 Budget	2021 Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 4,124	\$ 4,323	\$ 4,610	\$ 4,822
Contractual Services	5,403	5,030	5,608	5,437
Materials and Supplies	48	47	59	37
Other Charges	-	1	15	15
O&M Before Capitalized Cost Total	\$ 9,575	\$ 9,401	\$ 10,292	\$ 10,311
Capitalized Cost	-	-	-	-
Total O&M	\$ 9,575	\$ 9,401	\$ 10,292	\$ 10,311
Capital Outlay	\$ 6	\$ 1	\$ -	\$ -

Expenditures by Department	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Communications Administration	\$ 617	\$ 593	\$ 621	\$ 565
Communications	1,466	1,459	1,601	1,637
Conservation Department	5,401	5,171	5,793	5,800
External Affairs	2,091	2,178	2,277	2,309
O&M Before Capitalized Cost Total	\$ 9,575	\$ 9,401	\$ 10,292	\$ 10,311
Capitalized Cost	-	-	-	-
Grand Total	\$ 9,575	\$ 9,401	\$ 10,292	\$ 10,311

Full-time Equivalent Positions	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Communications Administration	5.0	4.0	5.0	4.0
Communications	8.5	9.5	8.5	9.5
Conservation Department	22.7	24.0	24.0	24.0
External Affairs	11.0	12.0	14.0	14.0
Total Full-Time Equivalent Positions	47.2	49.5	51.5	51.5

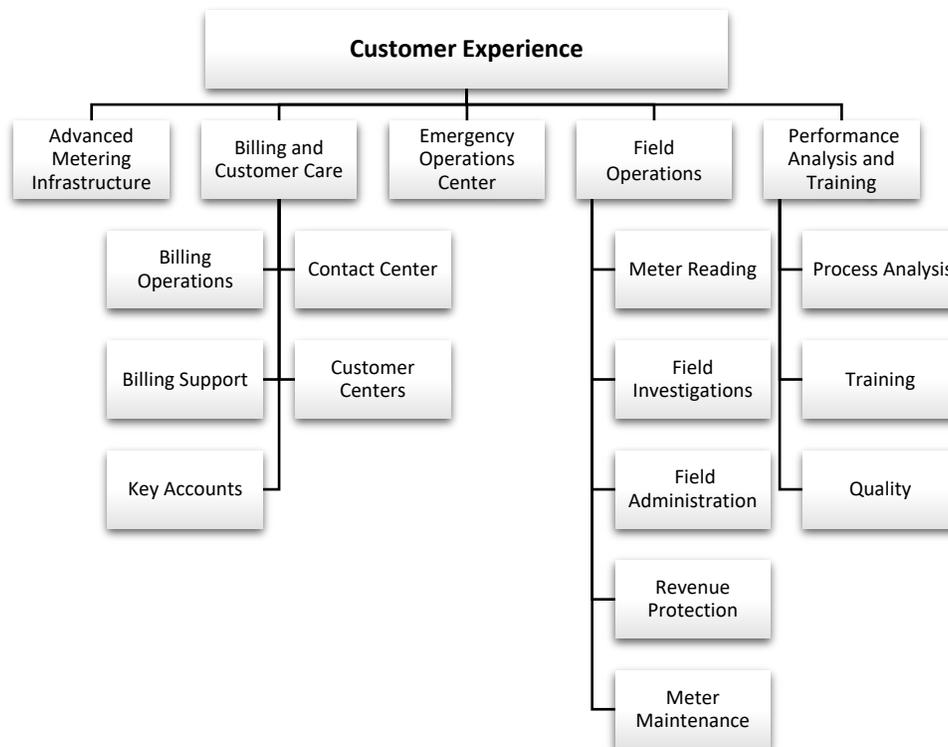
COMMUNICATIONS AND EXTERNAL AFFAIRS



CUSTOMER EXPERIENCE

The Customer Experience Group is responsible for providing the highest level of service to SAWS 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 SAWS customers and the maintenance of customer accounts.

- **Advanced Metering Infrastructure (AMI)** – Program management office for SAWS AMI initiative – ConnectH2O. Responsible for planning and conducting a pilot during 2021 and implementation is planned to begin deployment in 2022 with complete installation projected to take approximately five years.
- **Billing and Customer Care** – Reviews the billing process for accuracy of all SAWS bills printed daily and resolves customer billing issues. Also handles all inbound telephone, electronic and in-person customer inquiries regarding billing, account information, service problems and payments.
- **Emergency Operations Center** – Manages the 24-hour emergency call center and reports/dispatches crews for water leaks, main breaks, and overall tactical responses to problems within the system.
- **Field Operations** – Responsible for all meter related services including setting new meters, replacing existing meters, meter reading, service turn-on/turn-off requests, and service investigations. Reduces revenue loss through theft detection efforts.
- **Performance Analysis and Training** – Responsible for data analytics, training and process improvements throughout Customer Service. Ensures quality of customer interactions.



CUSTOMER EXPERIENCE

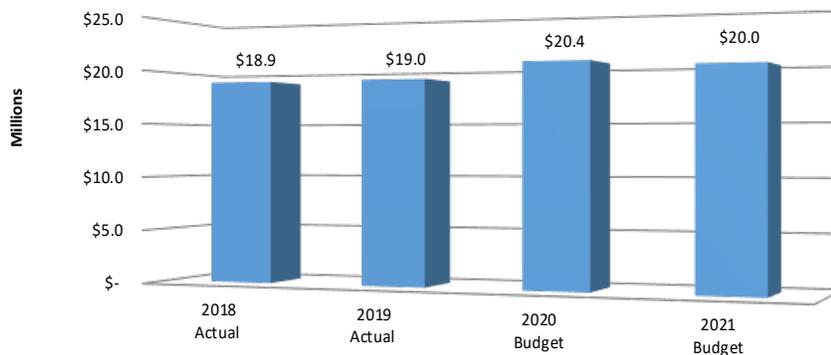
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Expenditures by Type	2018 Actual	2019 Actual	2020 Budget	2021 Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 16,727	\$ 16,897	\$ 17,725	\$ 18,583
Contractual Services	2,174	2,406	2,628	1,956
Materials and Supplies	710	794	718	798
Other Charges	-	3	4	2
O&M Before Capitalized Cost Total	\$ 19,611	\$ 20,100	\$ 21,075	\$ 21,339
Capitalized Cost	(691)	(1,112)	(662)	(1,375)
Total O&M	\$ 18,920	\$ 18,988	\$ 20,413	\$ 19,964
Capital Outlay	\$ 9	\$ -	\$ -	\$ -

Expenditures by Department	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Customer Service Administration	\$ 646	\$ 416	\$ 540	\$ 500
Advanced Metering Infrastructure (AMI)	13	225	613	397
Billing and Customer Care	7,127	7,029	7,432	7,553
Emergency Operations Center	1,327	1,467	1,453	1,506
Field Operations	9,576	10,187	10,303	10,505
Performance Analysis and Training	922	776	734	878
O&M Before Capitalized Cost Total	\$ 19,611	\$ 20,100	\$ 21,075	\$ 21,339
Capitalized Cost	(691)	(1,112)	(662)	(1,375)
Grand Total	\$ 18,920	\$ 18,988	\$ 20,413	\$ 19,964

Full-time Equivalent Positions	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Customer Service Administration	3.0	4.0	3.0	3.0
Advanced Metering Infrastructure (AMI)	1.0	2.0	3.0	3.0
Billing and Customer Care	139.5	139.5	139.5	149.5
Emergency Operations Center	22.0	22.0	22.0	22.0
Field Operations	139.0	137.0	144.0	140.0
Performance Analysis and Training	15.0	12.0	11.0	12.0
Total Full-Time Equivalent Positions	319.5	316.5	322.5	329.5

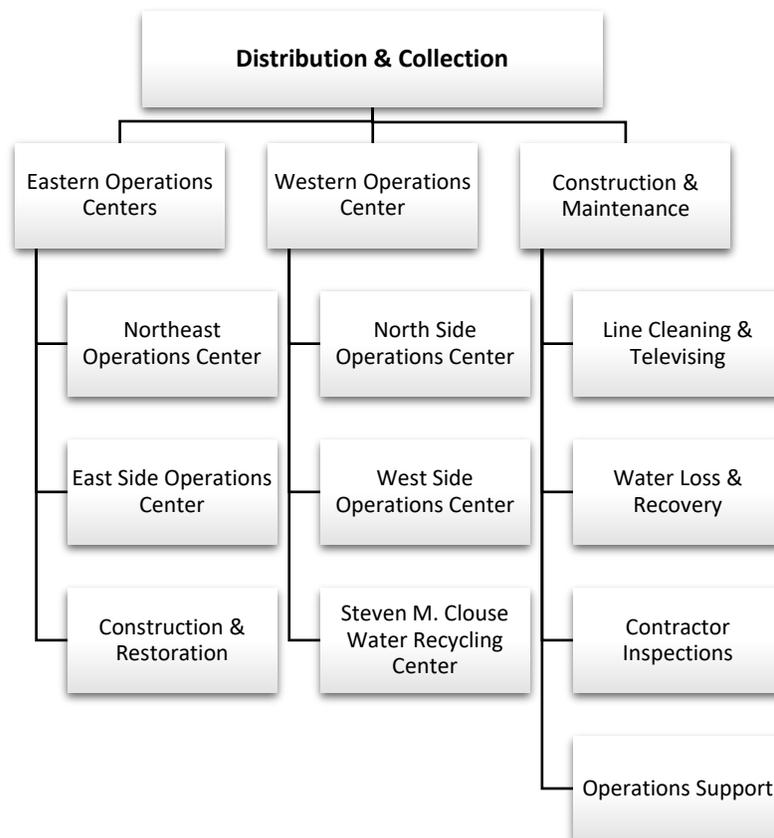
CUSTOMER EXPERIENCE



DISTRIBUTION AND COLLECTION

The Distribution and Collection Group operates, maintains and repairs over 12,500 miles of water and sewer mains, approximately 120 miles of recycled water distribution lines, and 9 miles of chilled water lines ensuring our customers receive uninterrupted, quality water and associated services. This is accomplished by the following departments:

- Operations Centers** – SAWS utility crews are mobilized from five strategically located operations centers throughout the city: Northeast, East Side, North Side, West Side and Steven M. Clouse Water Recycling Center (South Side). SAWS operations centers are staffed with the necessary resources to properly repair and maintain underground water, wastewater, recycled water, and chilled water infrastructure throughout the SAWS service area, including surface restoration.
- Construction & Maintenance** – Repairs and proactively maintains the wastewater collection system, including line cleaning and televising to verify sewer infrastructure condition and pinpoint defects. Water Loss & Recovery oversees proactive leak detection, valve assessment, and fire hydrant maintenance programs. Contractor Inspections direct external support of water and sewer repairs as well as concrete and asphalt restoration. Operations Support provides administrative support to departments within the group, including invoice processing, data management, service contract management, materials acquisition and notification services for maintenance crews. Operations Support also performs emergency and routine field investigations including utility locate services, and oversees proactive manhole inspections.



DISTRIBUTION AND COLLECTION

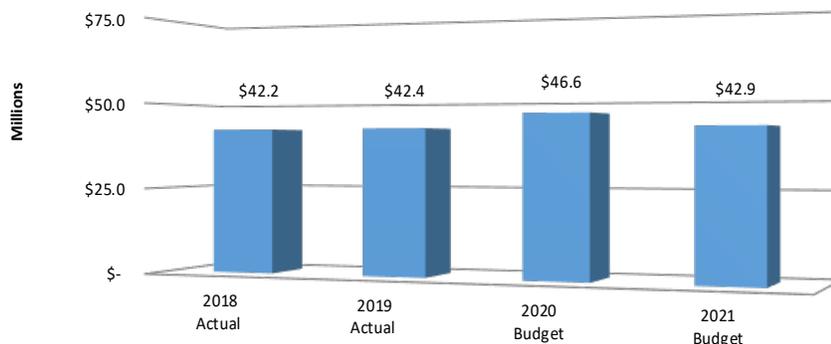
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Expenditures by Type	2018 Actual	2019 Actual	2020 Budget	2021 Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 31,253	\$ 32,238	\$ 30,454	\$ 31,731
Contractual Services	11,095	10,271	17,432	10,980
Materials and Supplies	5,734	5,963	5,558	5,982
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 48,082	\$ 48,472	\$ 53,444	\$ 48,693
Capitalized Cost	(5,847)	(6,030)	(6,829)	(5,770)
Total O&M	\$ 42,235	\$ 42,442	\$ 46,615	\$ 42,923
Capital Outlay	\$ 322	\$ 179	\$ 1,715	\$ 340

Expenditures by Department	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Office of the VP - Distribution and Collection	\$ 637	\$ 1,024	\$ 1,133	\$ 1,295
Construction and Maintenance	22,039	21,451	24,039	18,437
Distribution and Collection Support Services	3,632	4,210	7,496	7,984
Eastern Service Centers	10,800	11,025	10,915	11,078
Western Service Centers	10,974	10,762	9,861	9,899
O&M Before Capitalized Cost Total	\$ 48,082	\$ 48,472	\$ 53,444	\$ 48,693
Capitalized Cost	(5,847)	(6,030)	(6,829)	(5,770)
Grand Total	\$ 42,235	\$ 42,442	\$ 46,615	\$ 42,923

Full-time Equivalent Positions	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Office of the VP - Distribution and Collection	4.0	7.0	7.0	8.5
Construction and Maintenance	172.0	168.0	165.0	169.0
Distribution and Collection Support Services	36.0	48.0	41.0	48.0
Eastern Service Centers	133.0	129.0	131.0	130.0
Western Service Centers	132.0	127.0	130.0	128.0
Total Full-Time Equivalent Positions	477.0	479.0	474.0	483.5

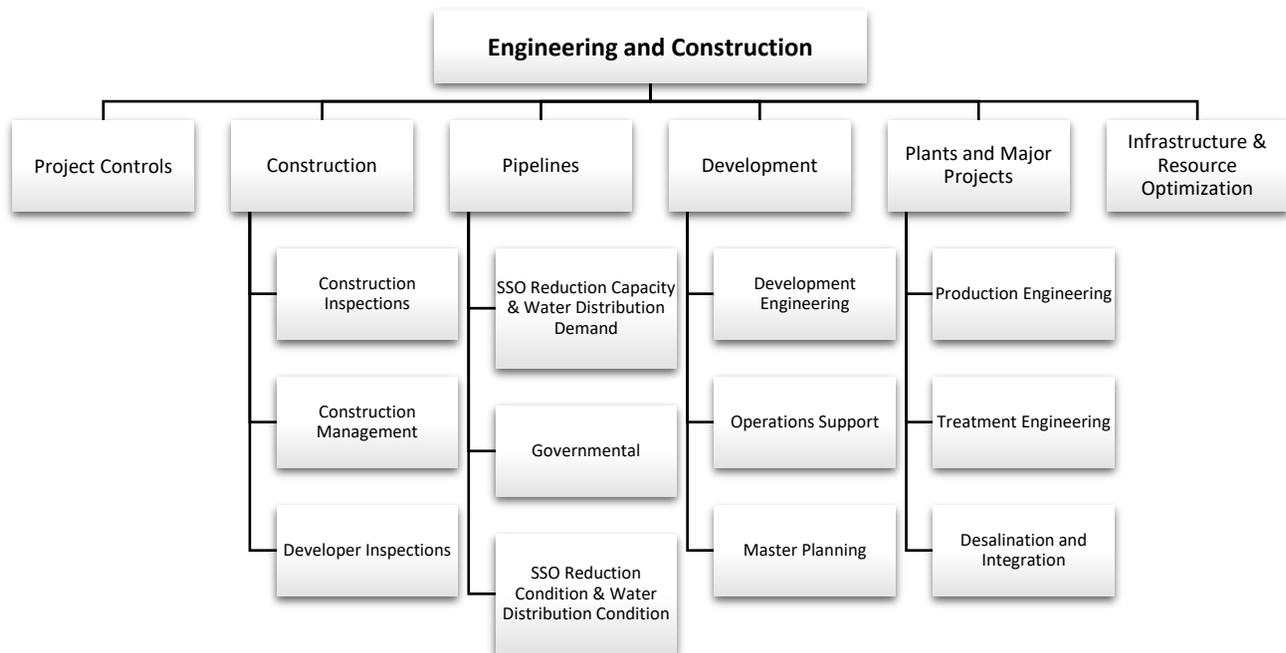
DISTRIBUTION AND COLLECTION



ENGINEERING AND CONSTRUCTION

The Engineering and Construction Group coordinates the development and execution of SAWS Capital Improvements Program (CIP). 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 manages the design and construction of new and replacement water and wastewater infrastructure. The Engineering and Construction group is comprised of the following departments:

- **Project Controls** – Oversees the CIP and supports Sanitary Sewer Overflow Reduction Program (SSORP) compliance through project execution. Project Controls focuses on cost, schedule, document and data management, quality control and compliance audits.
- **Construction** – Inspects water delivery, sewer, and water supply infrastructure construction projects.
- **Pipelines** – Plans and coordinates design activities, for wastewater collection system projects including replacement and rehabilitation of existing mains as well as the design of new mains. Coordinates the adjustments of SAWS facilities within public right of way (state, county and city) in accordance with the Governmental program.
- **Development** – Manages impact fee program, develops water and wastewater master plans, coordinates infrastructure necessary for new development, and provides engineering support to Distribution & Collection and Production & Treatment groups.
- **Plants and Major Projects** – Plans and coordinates design activities for water distribution projects, potable and recycled water production facilities, and wastewater treatment plants.
- **Infrastructure & Resource Optimization** - Oversees efforts to maximize usage of SAWS assets and infrastructure.



ENGINEERING AND CONSTRUCTION

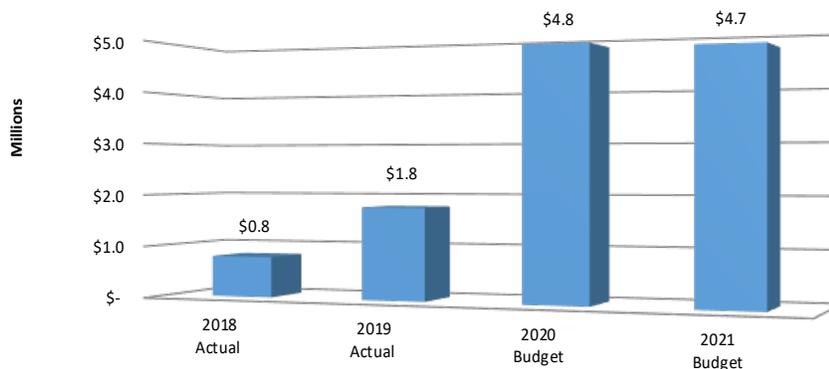
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Expenditures by Type	2018 Actual	2019 Actual	2020 Budget	2021 Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 16,337	\$ 17,356	\$ 18,544	\$ 18,778
Contractual Services	723	1,233	3,263	3,085
Materials and Supplies	71	61	68	58
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 17,131	\$ 18,650	\$ 21,875	\$ 21,921
Capitalized Cost	(16,348)	(16,880)	(17,074)	(17,200)
Total O&M	\$ 783	\$ 1,770	\$ 4,801	\$ 4,721
	-	-	-	-
Capital Outlay	\$ 8	\$ 1	\$ -	\$ -

Expenditures by Department	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Office of the VP - Engineering and Construction	\$ 1,207	\$ 1,236	\$ 1,227	\$ 1,154
Construction	6,015	6,419	6,907	7,060
Development	3,890	4,617	6,858	6,671
Infrastructure and Resource Optimization	-	-	-	146
Pipelines	3,795	3,984	4,340	4,444
Plants and Major Projects	1,846	1,775	1,919	2,090
Central Water Integration Pipeline Project	378	619	624	356
O&M Before Capitalized Cost Total	\$ 17,131	\$ 18,650	\$ 21,875	\$ 21,921
Capitalized Cost	(16,348)	(16,880)	(17,074)	(17,200)
Grand Total	\$ 783	\$ 1,770	\$ 4,801	\$ 4,721

Full-time Equivalent Positions	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Office of the VP - Engineering and Construction	11.5	10.5	10.5	9.0
Construction	75.0	75.0	75.0	75.0
Development	43.5	44.5	44.5	43.0
Infrastructure and Resource Optimization				1.0
Pipelines	45.0	45.0	45.0	45.0
Plants and Major Projects	17.5	17.5	17.5	19.0
Central Water Integration Pipeline Project	4.0	5.0	5.0	2.0
Total Full-Time Equivalent Positions	196.5	197.5	197.5	194.0

ENGINEERING AND CONSTRUCTION

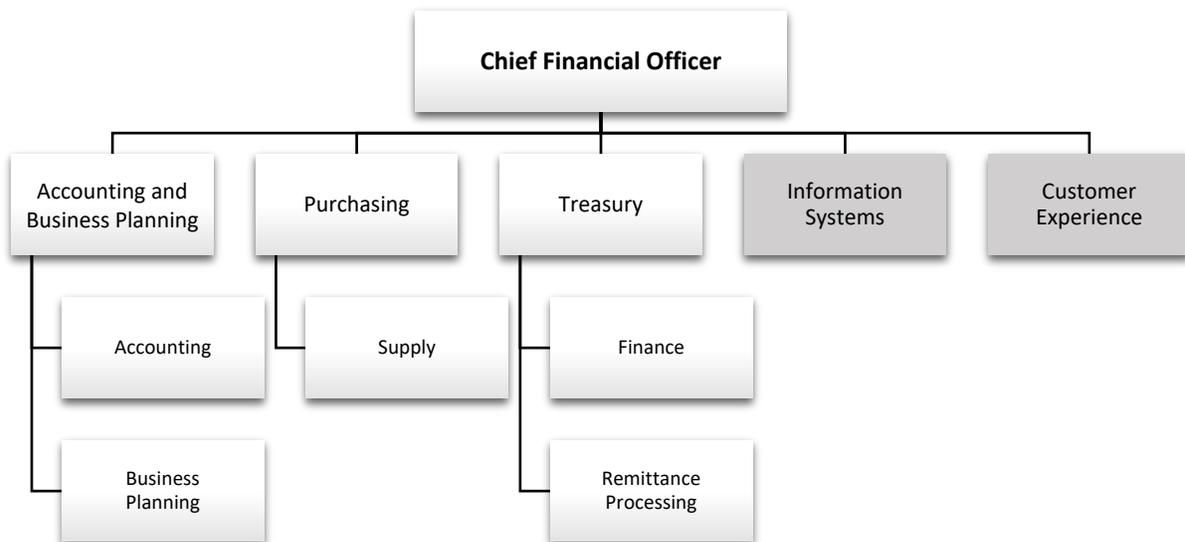


FINANCIAL SERVICES

The Financial Services Group is headed by the Sr. Vice President/Chief Financial Officer (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:**
 - *Accounting* – Responsible for accurate and timely accounting and financial reporting through the General Accounting, Property Accounting, Payroll, and Accounts Payable units.
 - *Business Planning* – Ensures that SAWS' strategic objectives are financially supported through short- and long-range financial planning; annual budget planning and preparation; and rates analysis and development to provide revenues sufficient to support operating activities and capital improvement project implementation.
- **Purchasing** – Manages the processing and contracting of all procurement requests for materials, supplies and services. Also manages:
 - *Supply* – Oversees the inventory control process by organizing and managing the flow of materials inventory from their initial purchase to destination.
- **Treasury:**
 - *Finance* – Responsible for banking relationships, investment and debt management.
 - *Remittance Processing* – Customer payment processing.

The CFO also oversees the Information Systems and Customer Experience groups.



FINANCIAL SERVICES

(\$ in thousands)

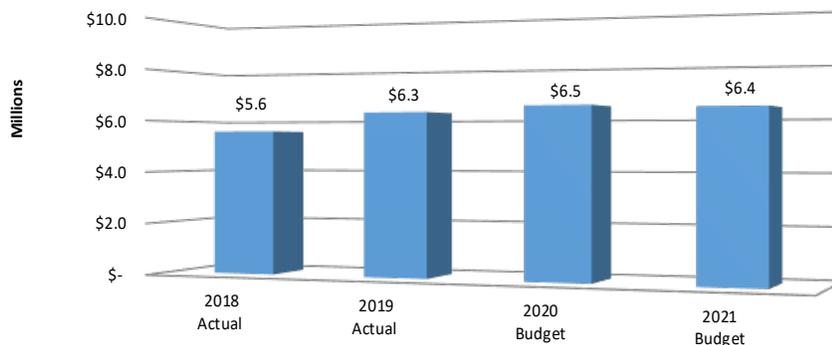
Expenditures by Type	2018 Actual	2019 Actual	2020 Budget	2021 Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 5,270	\$ 5,550	\$ 5,726	\$ 5,795
Contractual Services	506	839	826	685
<i>Newspaper Published Notices*</i>	34	38	15	15
Materials and Supplies	(30)	71	43	41
Other Charges	3	20	125	124
O&M Before Capitalized Cost Total	\$ 5,749	\$ 6,480	\$ 6,720	\$ 6,645
Capitalized Cost	(175)	(191)	(213)	(220)
Total O&M	\$ 5,574	\$ 6,289	\$ 6,507	\$ 6,425
Capital Outlay	\$ 270	\$ 1	\$ -	\$ -

Expenditures by Department	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Office of the CFO	\$ 432	\$ 467	\$ 456	\$ 459
Accounting and Business Planning	2,706	3,034	3,195	3,016
Purchasing and Supply	1,782	2,097	1,986	2,004
Treasury	829	882	1,083	1,166
O&M Before Capitalized Cost Total	\$ 5,749	\$ 6,480	\$ 6,720	\$ 6,645
Capitalized Cost	(175)	(191)	(213)	(220)
Grand Total	\$ 5,574	\$ 6,289	\$ 6,507	\$ 6,425

Full-time Equivalent Positions	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Office of the CFO	2.0	2.0	2.0	2.0
Accounting and Business Planning	28.0	29.0	29.0	29.0
Purchasing and Supply	23.0	24.0	24.0	24.0
Treasury	12.0	11.0	10.0	9.0
Total Full-Time Equivalent Positions	65.0	66.0	65.0	64.0

*In accordance with 86R House Bill 1495

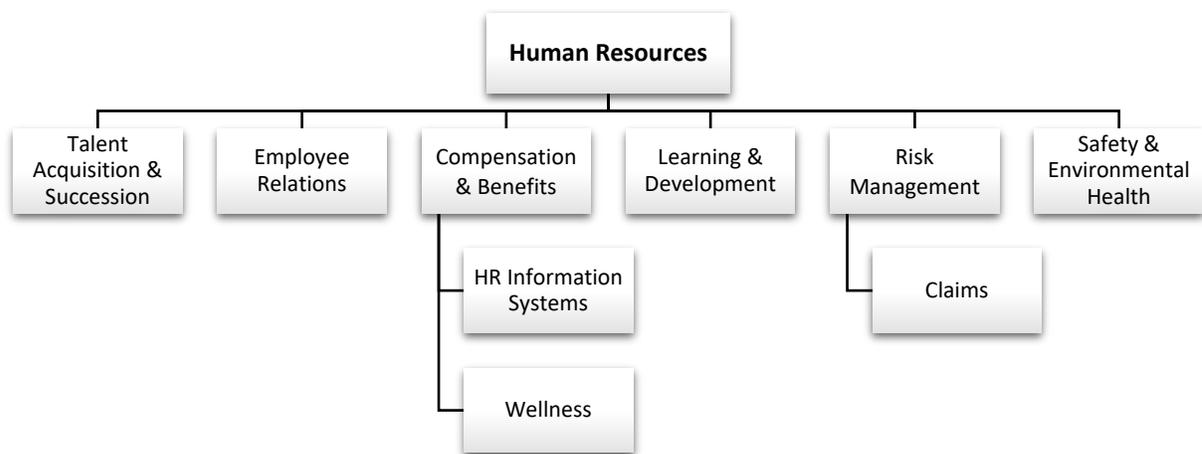
FINANCIAL SERVICES



HUMAN RESOURCES

The Human Resources Group is committed to attracting and retaining a workforce of qualified employees to achieve the goals and mission of SAWS. SAWS' core values of Excellence, Integrity, and Respect are supported by developing and implementing comprehensive, innovative and proactive programs in employee relations and development, total compensation, benefits and wellness, and risk management and workplace safety. The group promotes continuous personal and professional growth for employees by focusing on the following areas:

- **Talent Acquisition & Succession** – Proactively implements recruitment strategies to attract, secure and retain top talent for SAWS. Recruits employee resources required by all administrative and operational areas. Forecasts and assists organizational areas with succession management.
- **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.
- **Compensation & Benefits** – Develops and manages the employees' compensation, benefit and wellness programs, balancing competitiveness and cost efficiency for these plans and programs. Responsible for the plan development and fiscal accountability of all medical and prescription plans, pension programs, wellness initiatives, and oversees the administration of these plans and programs.
- **Learning & Development** – Develops strategies and designs for organizational development, talent and performance management, employee engagement, and change management functions. Manages learning initiatives around a continuous cycle of needs analysis, design, project management, delivery, and evaluation. Helps lead culture change through processes that support organizational learning, including the continual enhancement of the performance evaluation process.
- **Risk Management** – Manages all facets of the comprehensive commercial insurance program including administration of premises risk assessments. Administers all workers' compensation, casualty and subrogation claims.
- **Safety & Environmental Health** – Coordinates all workplace safety activities to ensure a safe environment for employees. Partners with organizational management in anticipating safety challenges and exploring opportunities for improvement.



HUMAN RESOURCES

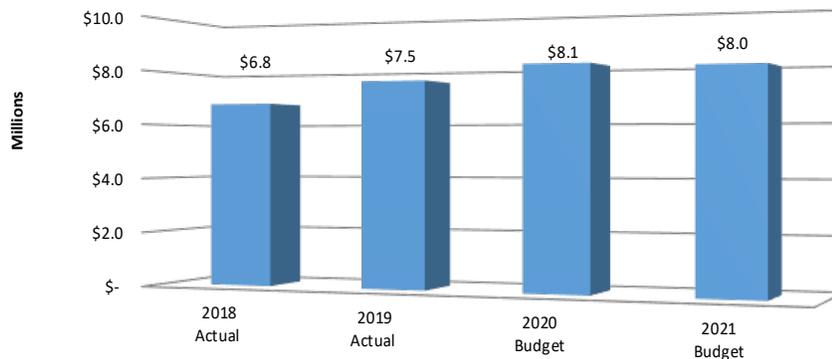
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Expenditures by Type	2018 Actual	2019 Actual	2020 Budget	2021 Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 4,171	\$ 4,655	\$ 5,032	\$ 5,186
Contractual Services	1,533	1,684	1,644	1,422
Materials and Supplies	54	47	67	66
Other Charges	1,003	1,153	1,329	1,277
O&M Before Capitalized Cost Total	\$ 6,761	\$ 7,539	\$ 8,072	\$ 7,951
Capitalized Cost	-	-	-	-
Total O&M	\$ 6,761	\$ 7,539	\$ 8,072	\$ 7,951
Capital Outlay	\$ 48	\$ 2	\$ -	\$ -

Expenditures by Department	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Human Resources	\$ 4,168	\$ 4,725	\$ 4,743	\$ 4,660
Risk Management	2,593	2,814	2,253	2,375
Safety and Environmental Health	-	-	1,076	916
O&M Before Capitalized Cost Total	\$ 6,761	\$ 7,539	\$ 8,072	\$ 7,951
Capitalized Cost	-	-	-	-
Grand Total	\$ 6,761	\$ 7,539	\$ 8,072	\$ 7,951

Full-time Equivalent Positions	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Human Resources	32.0	32.0	31.0	33.0
Risk Management	17.0	9.0	9.0	9.0
Safety and Environmental Health		9.0	10.0	9.0
Total Full-Time Equivalent Positions	49.0	50.0	50.0	51.0

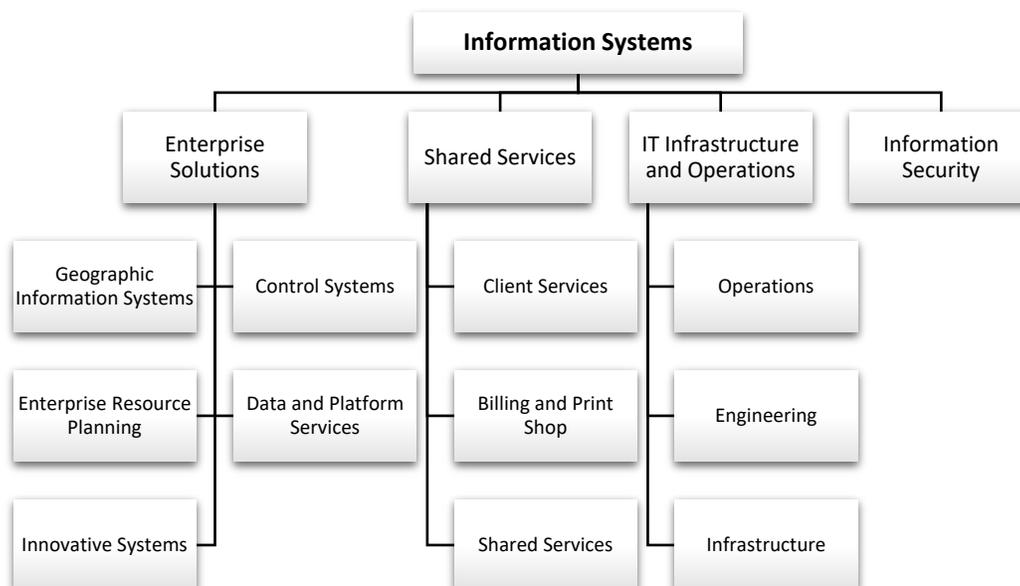
HUMAN RESOURCES



INFORMATION SYSTEMS

SAWS Information Systems Group delivers quality, secure, cost-effective applications and information technology services, which promote innovation to sustain growth while enabling SAWS to better serve our valued customers. Information Systems teams include:

- **Enterprise Solutions:**
 - *Geographic Information Systems (GIS)* – Develops, analyzes and delivers geographic data and solutions related to SAWS infrastructure and activities.
 - *Control Systems* – Implements, monitors, and maintains supervisory control and data acquisition (SCADA) systems.
 - *Enterprise Resource Planning* – Responsible for the programming, configuration, implementation, support and sustainability for all major business support applications.
 - *Data and Platform Services* - Manages the enterprise data warehouse, business intelligence and GIS platforms to provide SAWS timely information for decision making.
 - *Innovative Systems* – Delivers rapid and effective development of innovative solutions for SAWS with a specific focus on improving customer experience through technology.
- **Shared Services** – Supports SAWS’ technology initiatives through project life-cycle management, metrics-based tracking, business process re-engineering, quality control/assurance, and organizational change management.
 - *Client Services* – Supports workstation and related peripheral devices across SAWS, including desktop support services as well as technology, software orders and requisitions.
 - *Billing and Print Shop* – Provides computer operations and bill printing services as well as copy services.
- **IT Infrastructure and Operations:**
 - *Operations* – Manages telecommunication services including internet protocol (IP) telephony, teleconferencing, call center systems, interactive voice response systems, recording systems, digital radio systems and 911 systems.
 - *Engineering* – Provides network and internet services, including all aspects of network architecture and engineering, and wired and wireless network infrastructure for SAWS facilities.
 - *Infrastructure* – Responsible for all aspects of systems administration, database administration, systems software and hardware, the storage area network, backup and disaster recovery.
- **Information Security** – Responsible for developing, monitoring, and maintaining cyber security controls to protect the confidentiality, integrity, and availability of enterprise data and information systems assets.



INFORMATION SYSTEMS

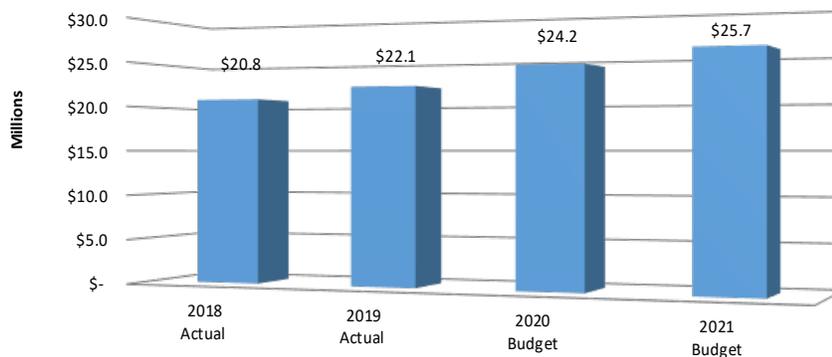
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Expenditures by Type	2018 Actual	2019 Actual	2020 Budget	2021 Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 9,542	\$ 10,252	\$ 11,176	\$ 11,688
Contractual Services	12,661	12,722	14,086	15,526
Materials and Supplies	455	491	533	505
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 22,658	\$ 23,465	\$ 25,795	\$ 27,719
Capitalized Cost	(1,852)	(1,396)	(1,622)	(2,000)
Total O&M	\$ 20,806	\$ 22,069	\$ 24,173	\$ 25,719
Capital Outlay	\$ 2,200	\$ 1,897	\$ 2,635	\$ 2,385

Expenditures by Department	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Office of the CIO	\$ 1,194	\$ 1,518	\$ 2,058	\$ 2,042
Control System Programming	991	535	570	777
Enterprise Solutions	5,525	7,323	8,005	8,494
Information Security	-	742	1,058	912
IT Infrastructure & Operations	7,158	6,855	7,416	7,700
Program Mgmt - IT Support	1,440	-	-	-
Shared Services	6,350	6,492	6,688	7,794
O&M Before Capitalized Cost Total	\$ 22,658	\$ 23,465	\$ 25,795	\$ 27,719
Capitalized Cost	(1,852)	(1,396)	(1,622)	(2,000)
Grand Total	\$ 20,806	\$ 22,069	\$ 24,173	\$ 25,719

Full-time Equivalent Positions	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Office of the CIO	9.0	10.0	12.0	11.0
Control System Programming	5.0	4.0	4.0	4.0
Enterprise Solutions	36.7	32.0	32.0	32.0
Information Security		2.0	2.0	2.0
IT Infrastructure & Operations	26.5	27.5	27.5	28.5
Program Mgmt - IT Support	6.0	-	-	-
Shared Services	21.0	28.0	28.0	28.0
Total Full-Time Equivalent Positions	104.2	103.5	105.5	105.5

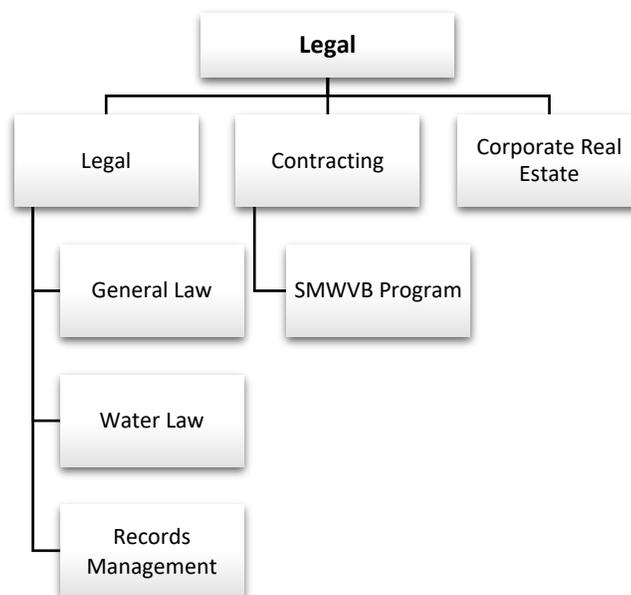
INFORMATION SYSTEMS



LEGAL

The Legal Group consists of the Legal Services Department, the Contracting Department, the Corporate Real Estate Department, and Records Management Department, whose functions are described below:

- **Legal Services** – Provides full service, in-house legal support to the SAWS’ Board of Trustees, Executive Management and staff, and manages the activities of outside legal counsel. The range of in-house legal expertise includes water supply, labor and employment, litigation management, real estate, general transactional, environmental and public law.
- **Contracting** – Manages the administration of all construction and professional services contracts and oversees administration of the SAWS Small, Minority and Women and Veteran Owned Business Program (SMWVB).
- **Corporate Real Estate** – Responsible for property acquisitions, dispositions, and lease management activities. Supports all construction and maintenance activities by obtaining all rights of entry and easements.
- **Records Management** – Manages all utility records in compliance with the Texas Local Government Records Act, Texas Public Information Act and best records management practices.



LEGAL

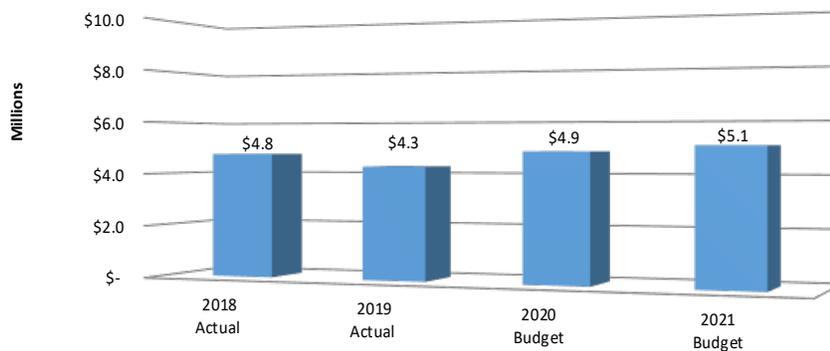
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Expenditures by Type	2018 Actual	2019 Actual	2020 Budget	2021 Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 4,274	\$ 4,247	\$ 4,425	\$ 4,709
Contractual Services	2,273	1,986	2,468	2,604
Materials and Supplies	18	21	24	22
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 6,565	\$ 6,254	\$ 6,917	\$ 7,335
Capitalized Cost	(1,815)	(1,978)	(2,054)	(2,250)
Total O&M	\$ 4,750	\$ 4,276	\$ 4,863	\$ 5,085
Capital Outlay	\$ -	\$ 204	\$ -	\$ -

Expenditures by Department	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Contracting	\$ 1,468	\$ 1,500	\$ 1,687	\$ 1,792
Corporate Real Estate	545	590	590	685
Legal Department	4,552	4,164	4,640	4,858
O&M Before Capitalized Cost Total	\$ 6,565	\$ 6,254	\$ 6,917	\$ 7,335
Capitalized Cost	(1,815)	(1,978)	(2,054)	(2,250)
Grand Total	\$ 4,750	\$ 4,276	\$ 4,863	\$ 5,085

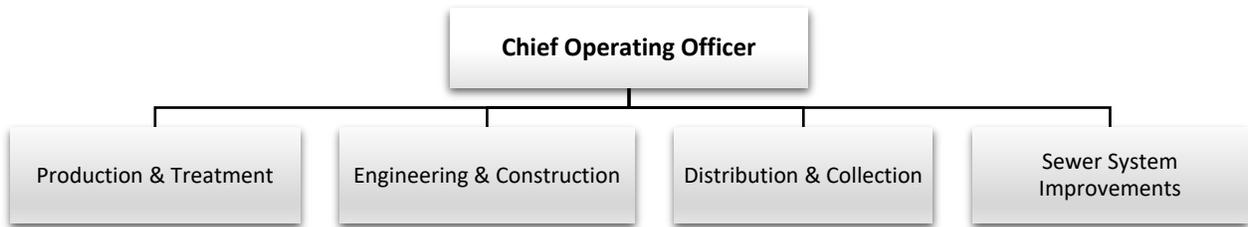
Full-time Equivalent Positions	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Contracting	17.0	16.0	16.0	16.0
Corporate Real Estate	7.0	7.0	6.0	7.0
Legal Department	15.5	15.5	15.5	15.5
Total Full-Time Equivalent Positions	39.5	38.5	37.5	38.5

LEGAL



OPERATIONS

The Operations Group is managed by the Sr. Vice President and Chief Operating Officer (COO). The COO oversees the Engineering & Construction, Distribution & Collection, Production & Treatment, and Sewer System Improvement Groups.



OPERATIONS

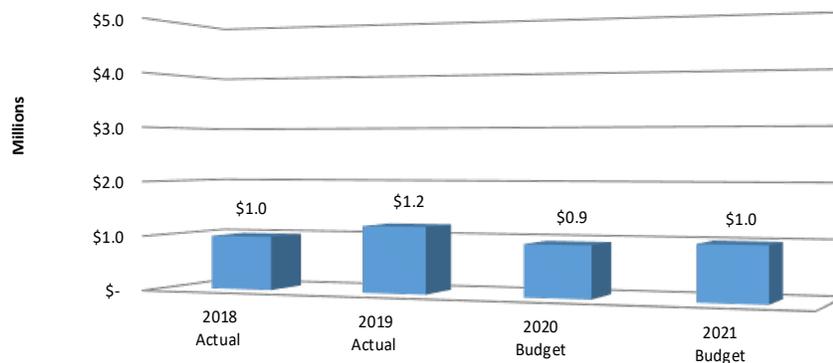
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Expenditures by Type	2018 Actual	2019 Actual	2020 Budget	2021 Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 908	\$ 1,007	\$ 870	\$ 957
Contractual Services	68	196	60	30
Materials and Supplies	4	1	1	1
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 980	\$ 1,204	\$ 931	\$ 988
Capitalized Cost	-	-	-	-
Total O&M	\$ 980	\$ 1,204	\$ 931	\$ 988
Capital Outlay	\$ -	\$ -	\$ -	\$ -

Expenditures by Department	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Ofc of Chief Operating Officer	\$ 980	\$ 1,176	\$ 931	\$ 988
Sr. VP Engineering and Construction	-	28	-	-
O&M Before Capitalized Cost Total	\$ 980	\$ 1,204	\$ 931	\$ 988
Capitalized Cost	-	-	-	-
Grand Total	\$ 980	\$ 1,204	\$ 931	\$ 988

Full-time Equivalent Positions	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Ofc of Chief Operating Officer	6.0	7.0	6.0	6.0
Sr. VP Engineering and Construction		1.0		
Total Full-Time Equivalent Positions	6.0	8.0	6.0	6.0

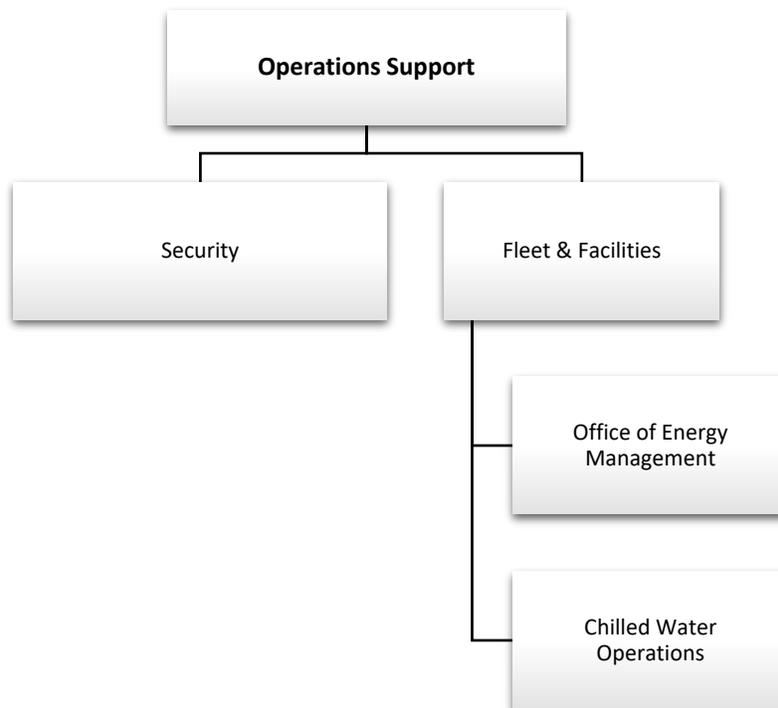
OPERATIONS



OPERATIONS SUPPORT

The Operations Support Group oversees the operation of Fleet and Facilities, Chilled Water plants, and Security.

- **Security** – Manages a proactive security program and associated support contracts for all SAWS facilities.
- **Fleet & Facilities** – Provides comprehensive maintenance services for all SAWS vehicles and equipment. Fleet also manages vehicle replacement and disposal. Facilities Maintenance provides building maintenance and management services at SAWS facilities. This department also includes the following functions:
 - Office of Energy Management manages the process for electric/gas services metering, bill review and payment for all SAWS activities.
 - Chilled Water Operations provide service to customers in downtown San Antonio and at Port San Antonio.



OPERATIONS SUPPORT

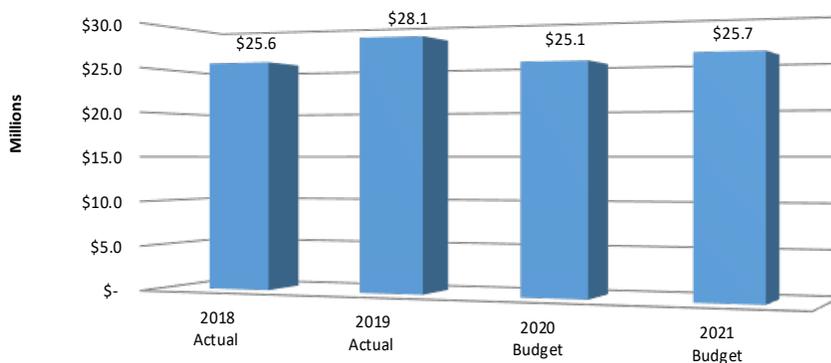
(\$ in thousands)

Expenditures by Type	2018 Actual	2019 Actual	2020 Budget	2021 Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 7,995	\$ 8,521	\$ 8,353	\$ 8,813
Contractual Services	14,405	15,938	14,658	14,624
Materials and Supplies	4,394	4,643	4,079	3,309
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 26,794	\$ 29,102	\$ 27,090	\$ 26,746
Capitalized Cost	(1,164)	(993)	(1,980)	(1,000)
Total O&M	\$ 25,630	\$ 28,109	\$ 25,110	\$ 25,746
Capital Outlay	\$ 7,165	\$ 5,723	\$ 5,501	\$ 5,301

Expenditures by Department	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Fleet and Facilities	\$ 23,465	\$ 25,461	\$ 22,654	\$ 22,918
Security	3,329	3,641	4,436	3,828
O&M Before Capitalized Cost Total	\$ 26,794	\$ 29,102	\$ 27,090	\$ 26,746
Capitalized Cost	(1,164)	(993)	(1,980)	(1,000)
Grand Total	\$ 25,630	\$ 28,109	\$ 25,110	\$ 25,746

Full-time Equivalent Positions	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Fleet and Facilities	94.0	95.0	96.0	98.0
Security	11.0	11.0	11.0	11.0
Total Full-Time Equivalent Positions	105.0	106.0	107.0	109.0

OPERATIONS SUPPORT



OTHER REQUIREMENTS

Other Requirements has been established to account for operations and maintenance expenses that relate to the overall organization and are difficult to associate with specific departments. These expenses affect all departments across the organization and are accumulated within this department to facilitate the budgeting and accounting process. Specifically, they include funds for performance pay adjustments, dependent medical insurance, workers' compensation, unemployment compensation, accrued vacation leave, leave buyback and post-retirement medical benefits.

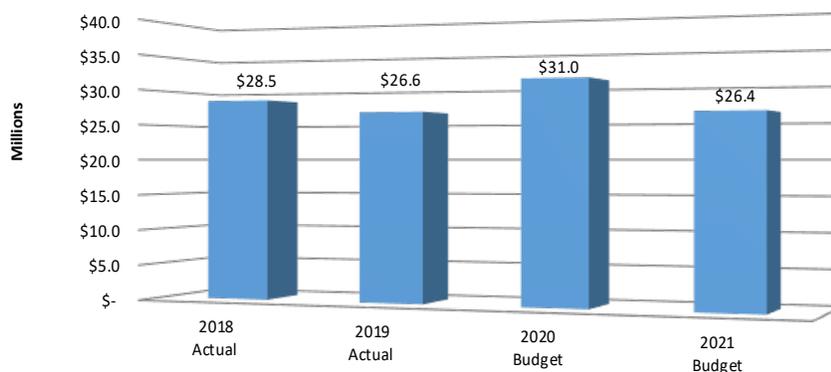
(\$ in thousands)

Expenditures by Type	2018 Actual	2019 Actual	2020 Budget	2021 Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 19,444	\$ 20,208	\$ 21,067	\$ 17,978
Contractual Services	417	949	330	655
Materials and Supplies	-	-	-	-
Other Charges	8,950	6,196	10,506	8,515
O&M Before Capitalized Cost Total	\$ 28,811	\$ 27,353	\$ 31,903	\$ 27,148
Capitalized Cost	(335)	(727)	(895)	(750)
Total O&M	\$ 28,476	\$ 26,626	\$ 31,008	\$ 26,398
Capital Outlay	\$ -	\$ -	\$ -	\$ -

Expenditures by Department	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Other Requirements	\$ 28,811	\$ 27,353	\$ 31,903	\$ 27,148
O&M Before Capitalized Cost Total	28,811	27,353	31,903	27,148
Capitalized Cost	(335)	(727)	(895)	(750)
Grand Total	\$ 28,476	\$ 26,626	\$ 31,008	\$ 26,398

Full-time Equivalent Positions	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Other Requirements	3.0	2.0	4.0	2.0
Total Full-Time Equivalent Positions	3.0	2.0	4.0	2.0

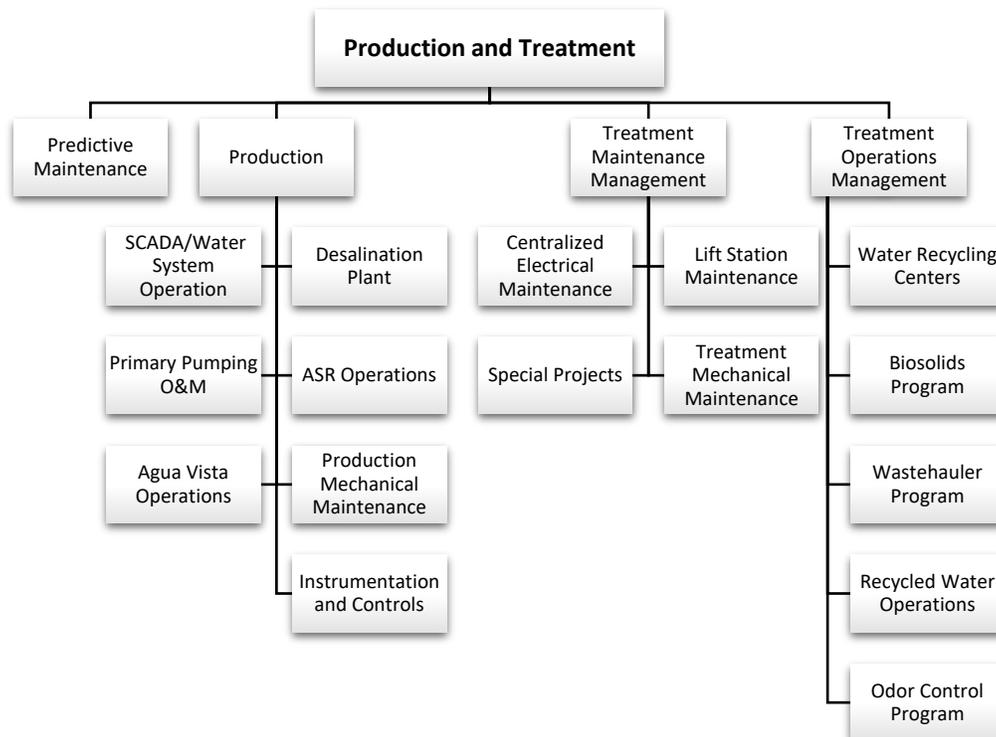
OTHER REQUIREMENTS



PRODUCTION AND TREATMENT

The Production and Treatment Group provides the essential function of managing the 24-hour-a-day operation of the water and wastewater system. The group is responsible for the production of potable water; treatment of wastewater for distribution in the recycle system or discharge; processing of wastewater biosolids for ultimate disposal; distribution of recycled water for reuse purposes; management of SAWS-wide odor control program; and security of facilities and personnel. This group consists of the following departments:

- **Predictive Maintenance** – Manages and plans maintenance functions within the Production and Treatment group, as well as performs analysis to reduce critical infrastructure failures and ultimately improve systems.
- **Production** – Manages the production of potable water across SAWS service area. Operates SAWS potable water facilities, recycled water distribution, and Aqua Vista Facility, H₂Oaks Facility operation, including the Aquifer Storage and Recovery operations. Also manages the Production Mechanical Maintenance unit and associated instrumentation and controls. This group will support the operation of the new Agua Vista Station, which will receive and treat Vista Ridge water for transmission into the SAWS distribution system.
- **Treatment Maintenance Management** – Manages centralized maintenance of mechanical systems, and electrical systems for all SAWS production, treatment and lift station facilities to include the H₂Oaks Facility. The department is also responsible for maintenance of the recycled water outfalls, and special construction and repair projects across the system.
- **Treatment Operations Management** – Oversees all operations of the three water recycling centers, which includes biosolids processing to ensure proper recycling or disposal in compliance with state and federal regulations. Also manages the Waste Hauler program and the odor control program. Additionally, operates recycled water outfalls and environmental flows into rivers.



PRODUCTION AND TREATMENT

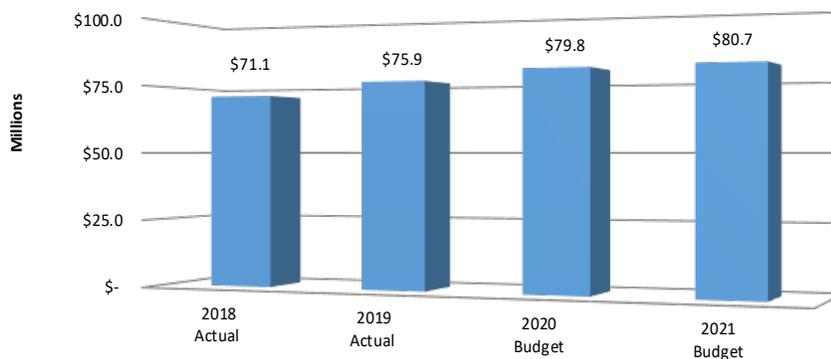
(\$ in thousands)

Expenditures by Type	2018 Actual	2019 Actual	2020 Budget	2021 Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 21,614	\$ 22,266	\$ 22,975	\$ 23,795
Contractual Services	38,899	41,004	43,738	43,960
Materials and Supplies	11,403	13,710	13,153	13,895
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 71,916	\$ 76,980	\$ 79,866	\$ 81,650
Capitalized Cost	(809)	(1,095)	(20)	(1,000)
Total O&M	\$ 71,107	\$ 75,885	\$ 79,846	\$ 80,650
Capital Outlay	\$ 703	\$ 1,439	\$ 1,595	\$ 1,470

Expenditures by Department	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Office of the VP - Production and Treatment	\$ 540	\$ 497	\$ 454	\$ 530
Ofc of Director - Production and Treatment Operati	279	81	67	66
Production Department	35,819	36,244	42,625	42,924
Treatment Maintenance Management	14,047	17,696	15,346	15,691
Treatment Operations Management	21,231	22,462	21,374	22,439
O&M Before Capitalized Cost Total	71,916	76,980	79,866	81,650
Capitalized Cost	(809)	(1,095)	(20)	(1,000)
Grand Total	\$ 71,107	\$ 75,885	\$ 79,846	\$ 80,650

Full-time Equivalent Positions	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Office of the VP - Production and Treatment	2.0	3.0	2.0	3.0
Ofc of Director - Production and Treatment Operati	2.0	1.0	1.0	1.0
Production Department	86.0	90.0	95.0	96.0
Treatment Maintenance Management	119.0	116.0	118.0	117.0
Treatment Operations Management	74.0	73.0	73.0	73.0
Total Full-Time Equivalent Positions	283.0	283.0	289.0	290.0

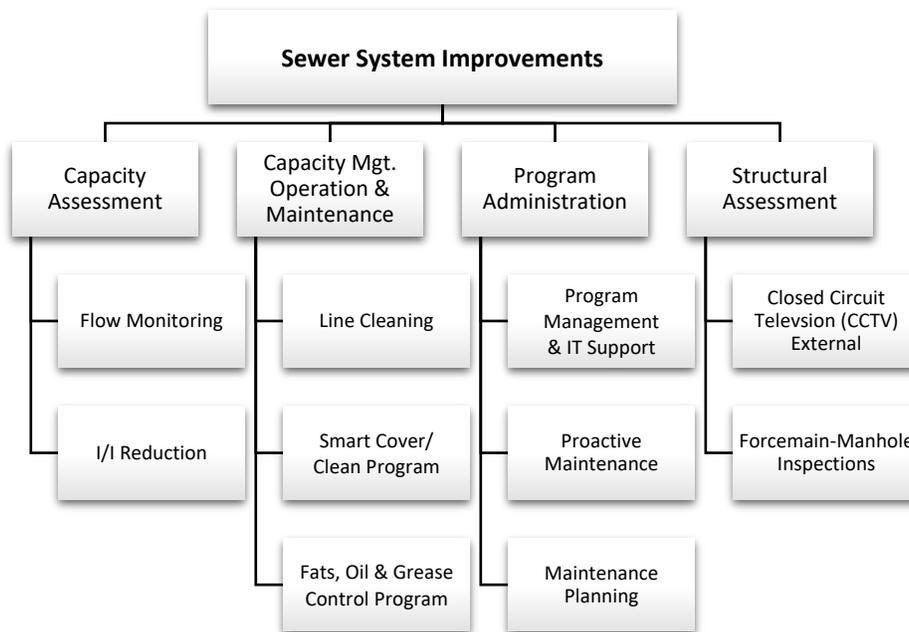
PRODUCTION AND TREATMENT



SEWER SYSTEM IMPROVEMENTS

The Sewer System Improvements Group is responsible for developing, implementing and administering various programs designed to reduce sanitary sewer overflows (SSO) in the wastewater collection and transmission system (WCTS). This is accomplished through the following functions:

- **Capacity Assessment** – Evaluates the capacity of the WCTS through flow monitoring and hydraulic modeling. Directs the Inflow/Infiltration (I/I) Reduction Program implemented to decrease excess flow from entering the WCTS during significant rain events.
- **Capacity Management Operation & Maintenance (CMOM)** – Executes a comprehensive program encompassing activities to optimize the performance of the WCTS, including a system-wide cleaning program, Smart Cover/Clean Program and Fats, Oils, and Grease Control Program.
- **Program Administration** – Directs the comprehensive Sewer System Improvement program activities related to SSO reduction. Provides overall data management to include reporting requirements pertaining to SSOs as well as the operations and maintenance of the WCTS.
- **Structural Sewer Assessment** – Coordinates and executes activities associated with inspecting, assessing and performing remedial measures associated with condition and capacity constraints in the WCTS.



SEWER SYSTEM IMPROVEMENTS

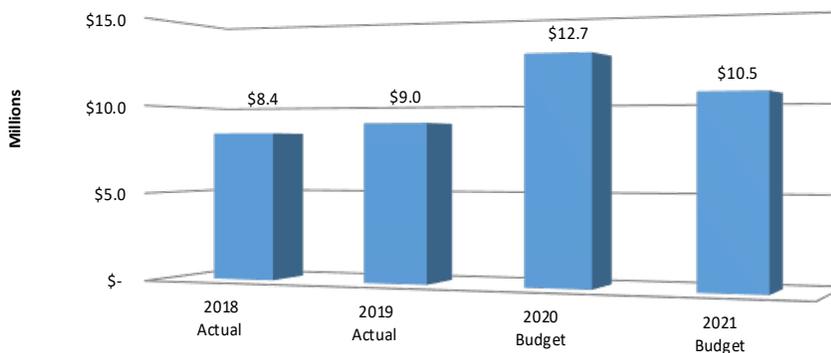
(\$ in thousands)

Expenditures by Type	2018 Actual	2019 Actual	2020 Budget	2021 Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 2,823	\$ 2,893	\$ 3,125	\$ 2,599
Contractual Services	8,074	6,326	9,654	8,230
Materials and Supplies	84	67	57	51
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 10,981	\$ 9,286	\$ 12,836	\$ 10,880
Capitalized Cost	(2,566)	(327)	(150)	(356)
Total O&M	\$ 8,415	\$ 8,959	\$ 12,686	\$ 10,524
Capital Outlay	\$ 8	\$ -	\$ -	\$ -

Expenditures by Department	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Capacity Assessment	\$ 1,321	\$ 1,285	\$ 1,010	\$ 1,010
Capacity Mgt O&M (CMOM)	2,870	1,953	4,510	4,284
Program Administration	5,833	3,647	3,406	2,676
Structural Sewer Assessment	957	2,401	3,910	2,910
O&M Before Capitalized Cost Total	\$ 10,981	\$ 9,286	\$ 12,836	\$ 10,880
Capitalized Cost	(2,566)	(327)	(150)	(356)
Grand Total	\$ 8,415	\$ 8,959	\$ 12,686	\$ 10,524

Full-time Equivalent Positions	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Program Administration	37.0	35.0	37.0	30.0
Total Full-Time Equivalent Positions	37.0	35.0	37.0	30.0

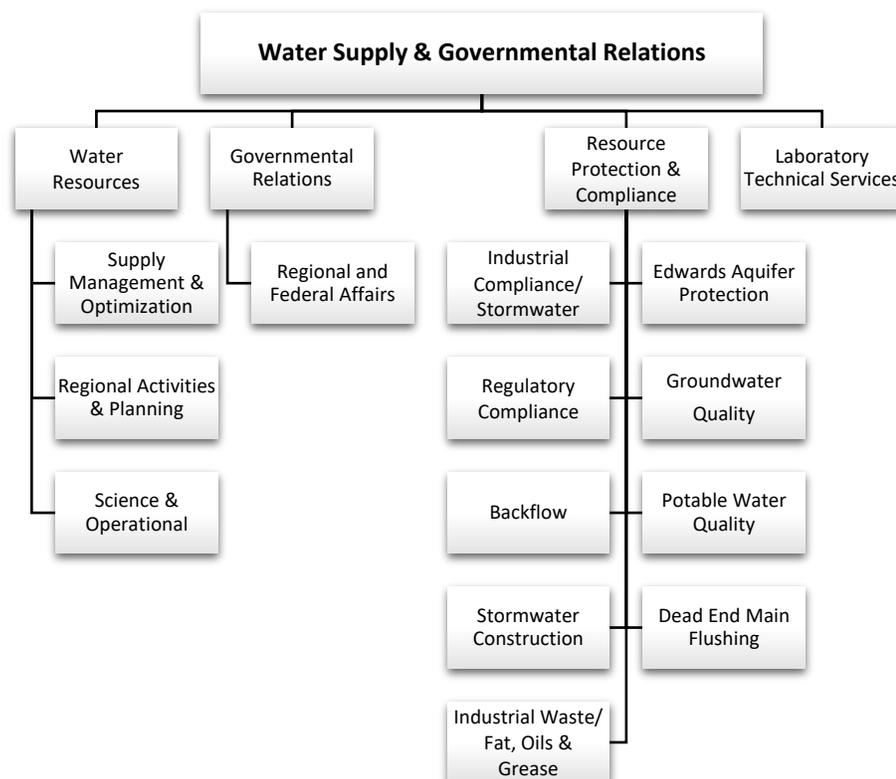
SEWER SYSTEM IMPROVEMENTS



WATER RESOURCES AND GOVERNMENTAL RELATIONS

The Water Resources and Governmental Relations Group is primarily responsible for development and management of water supplies, drought management and water rights acquisitions, as well as management of the Mitchell Lake Expanded Wetlands. The group consists of the following departments:

- Water Resources** – Implements the SAWS’ long-range Water Management Plan, through proactively managing existing supplies to ensure customer needs are met and leading efforts in the planning and development of new water supply opportunities to meet the city’s population growth. The Department has added the day to day obligations and interests in overseeing the contract with Vista Ridge LLC, SAWS newest and largest water supply project. Water Resources is also responsible for the marketing of the direct recycled water program as well as directing efforts to minimize non-revenue water and ensuring efficient use of water supplies.
- Governmental Relations** – Identifies and manages critical issues that have public impact and require the attention of Executive Management. Manages key strategic policy issues and relationships with elected officials and agencies at the regional, state and federal levels.
- 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 and oversees the dead end main flushing and backflow testing activities.
- Laboratory Technical Services** – The Lab is responsible for providing analytical services for all of SAWS water quality needs. The laboratory performs a wide variety of routine environmental tests to support the SAWS’ water and wastewater activities. The Lab is accredited by the Texas Commission on Environmental Quality (TCEQ) under the National Environmental Laboratory Accreditation Program.



WATER RESOURCES AND GOVERNMENTAL RELATIONS

(\$ in thousands)

Expenditures by Type	2018 Actual	2019 Actual	2020 Budget	2021 Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 10,567	\$ 10,792	\$ 11,287	\$ 11,316
Contractual Services	72,560	72,476	146,222	172,036
State Lobbying Contracts*			189	189
Materials and Supplies	533	547	605	575
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 83,660	\$ 83,815	\$ 158,114	\$ 183,927
Capitalized Cost	(9)	(12)	-	-
Total O&M	\$ 83,651	\$ 83,803	\$ 158,114	\$ 183,927

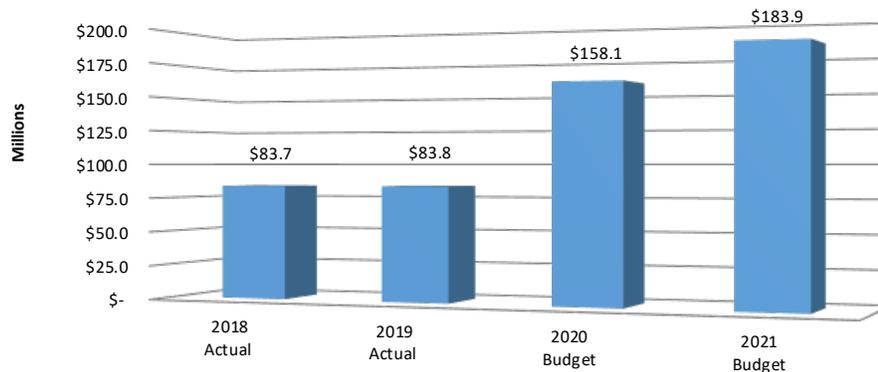
Capital Outlay	\$ 169	\$ 90	\$ 200	\$ 290
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Expenditures by Department	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Environmental Laboratory Services	2,284	2,396	2,566	2,630
Governmental Relations	2,273	1,800	2,168	1,356
Resource Protection & Compliance	8,861	8,357	9,045	8,628
Vista Ridge	6,562	874	77,738	103,702
Water Resources	63,680	70,388	66,597	67,611
O&M Before Capitalized Cost Total	\$ 83,660	\$ 83,815	\$ 158,114	\$ 183,927
Capitalized Cost	(9)	(12)	-	-
Grand Total	\$ 83,651	\$ 83,803	\$ 158,114	\$ 183,927

Full-time Equivalent Positions	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Environmental Laboratory Services	20.0	20.0	23.0	23.0
Governmental Relations	5.0	5.0	5.0	5.0
Resource Protection & Compliance	92.0	90.0	91.0	93.0
Vista Ridge	5.0	5.0	4.0	3.0
Water Resources	10.00	11.00	7.00	8.00
Total Full-Time Equivalent Positions	132.0	131.0	130.0	132.0

*In accordance with 86R House Bill 1495

WATER RESOURCES AND GOVERNMENTAL RELATIONS



FULL TIME EQUIVALENT POSITIONS

The 2021 Budget includes funding for 1,900.5 full-time equivalent (FTE) positions. This reflects a net increase of 10.5 authorized FTE positions from the 1,890 FTE positions budgeted in 2020.

A total of 18 FTE positions were added to the 2021 Budget:

- 4 Environmental Protection Specialists to support the Dead-End Main (DEM) flushing program
- 1 Backflow Prevention Inspector to support compliance with TCEQ requirements for backflow device inspections
- 1 Building & Refrigeration Technician to support the Facility Maintenance team with HVAC maintenance at Production, Treatment and Lift Station facilities. The addition of this position will allow SAWS to replace contract maintenance services at a lower cost
- 1 Project Engineer assigned to Engineering & Construction dedicated to Distribution & Collection, to support water and wastewater Capital Improvement Program (CIP) projects and specification development for maintenance materials and contracts
- 1 Water Operations & Maintenance Technician to oversee routine activities for the Agua Vista treatment facility
- 20 Customer Service Associates, calculated to 10 FTE's, to align the budget with Customer Service's new process of hiring temporary employees through SAWS instead of temporary employee agencies. The Temporary Services budget was reduced to offset the budget for these positions, resulting in a net zero impact to the O&M budget

The 2021 budget reflects the elimination of 7.5 existing, vacant FTE positions, resulting in a net increase of 10.5 FTE positions.

The following table shows the distribution of funded FTE positions within each SAWS organizational unit authorized in each budget year from 2018 through 2021. Periodically, FTE positions and resources are reallocated among different areas of the organization in order to better meet changing needs. In such instances, where possible, prior year authorized FTE position levels have been restated, as reflected in the table shown below, to be consistent with the current year organizational structure.

	2018 Actual	2019 Actual	2020 Budget	2021 Budget
Board of Trustees and Pres/CEO Group	14.5	13.5	13.5	14.0
Communications and External Affairs	47.2	49.5	51.5	51.5
Customer Experience	319.5	316.5	322.5	329.5
Distribution and Collection	477.0	479.0	474.0	483.5
Engineering and Construction	196.5	197.5	197.5	194.0
Financial Services	65.0	66.0	65.0	64.0
Human Resources	49.0	50.0	50.0	51.0
Information Systems	104.2	103.5	105.5	105.5
Legal	39.5	38.5	37.5	38.5
Operations	6.0	8.0	6.0	6.0
Operations Support	105.0	106.0	107.0	109.0
Production and Treatment	283.0	283.0	289.0	290.0
Sewer System Improvements	37.0	35.0	37.0	30.0
Water Resources and Governmental Relations	132.0	131.0	130.0	132.0
Other Requirements	3.0	2.0	4.0	2.0
Grand Total	1,878.4	1,879.0	1,890.0	1,900.5

CAPITAL IMPROVEMENT PROGRAM

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CAPITAL IMPROVEMENT PROGRAM

The Capital Improvement Program (CIP) is a planning and budgeting tool that provides information about SAWS infrastructure needs. It identifies requirements for sustaining, restoring and modernizing the facilities and infrastructure that support water supply and delivery, wastewater collection and treatment, and chilled water requirements in the SAWS service area. It also prioritizes and schedules projects for funding and execution through a multi-year plan.

The CIP supports four core businesses: Water Supply, Water Delivery, Wastewater and Chilled Water. Water Supply CIP consists of projects to develop long term water supplies from surface and groundwater sources, including any transmission pipelines required to deliver these water supplies to SAWS service area. Water Delivery provides for the expansion, improvement and replacement of infrastructure required to produce and deliver water to the customer while wastewater CIP focuses on infrastructure for the collection and treatment of wastewater. Chilled Water CIP provides for the expansion, improvement and replacement of infrastructure required to generate and deliver chilled water to customers in the downtown and Port San Antonio areas.

The 2021 CIP program totals \$541.3 million and is summarized in the table below.

<i>(\$ in millions)</i>	Water Supply	Water Delivery	Wastewater	Chilled Water	Total
Sources of Funds					
System Revenues	\$ 10.6	\$ 59.3	\$ 106.0	\$ 0.1	\$ 176.0
Capital Recovery Fees	5.0	27.5	49.2	-	81.7
Debt Proceeds	17.2	95.6	170.8	-	283.6
Total Sources of Funds	\$ 32.8	\$ 182.4	\$ 326.0	\$ 0.1	\$ 541.3
Uses of Funds					
Corporate	5.3	27.9	46.9	-	80.1
Water Resources	27.5	-	-	-	27.5
Collection Facilities	-	-	17.0	-	17.0
Governmental	-	27.8	27.8	-	55.6
Mains - New	-	26.7	23.3	-	50.0
Main Replacements	-	35.6	157.8	-	193.4
Production	-	64.4	-	-	64.4
Treatment	-	-	53.2	-	53.2
Chilled Water	-	-	-	0.1	0.1
Total Uses of Funds	\$ 32.8	\$ 182.4	\$ 326.0	\$ 0.1	\$ 541.3

The 2021 Water Supply program totals \$30.7 million and includes \$16.2 million for rehabilitation of the Artesia Pump Station and \$9.3 million for restoration of the production capacity of the Artesia Wells association with the pump station.

The 2021 Water Delivery program totals \$182.4 million for production facilities upgrades, replacements and expansion as well as water main replacement. The level of investment in Water Delivery infrastructure for 2021 is 79.3% higher than SAWS average annual investment in Water Delivery infrastructure over the last five years.

The 2021 Wastewater program totals \$326 million. Most of the 2021 Wastewater program, \$157.8 million or 48.4%, focuses on the rehabilitation and replacement of wastewater mains identified through the SAWS Sanitary Sewer Overflow Reduction Program (SSORP). These projects have been prioritized and scheduled to meet the requirements of SAWS Consent Decree with the federal government. The single largest of the SSORP projects in 2021 is the Small and Large Diameter Condition Remedial Measures project at a cost of \$64.8 million. This project will fund the rehabilitation of approximately 25 miles of small and 6.5 miles of large diameter sewer mains that have been identified by televised inspection to be in very poor condition.

The overall funding split for the 2021 water production and delivery and the wastewater collection and treatment program is 70% repairs and replacements and 30% additional capacity to support new growth and development.

SIGNIFICANT NON-ROUTINE CAPITAL EXPENDITURES

The majority of SAWS' CIP projects provide for routine, ongoing expenditures for major repair or replacement of infrastructure. Projects that are typically "one time" in nature and involve the development of a new water supply, the construction of new water production or wastewater treatment facilities or the acquisition of new technology that enhances service delivery could be considered significant non-routine capital expenditures.

Three projects discussed that fit the above criteria may be considered significant one-time expenditures:

- (1) Northeast Operations Center Project at \$28.9 million which involves the retention of professional design-build services from an Architect and Engineer (A/E) team that will design and build the new facility in northeast San Antonio which will include new administration, fleet, and supply buildings, along with fueling islands with above ground tanks, and associated site work, parking and materials storage areas;
- (2) Turtle Creek No. 3 Well Field project at \$25.7 million which provides for a new 42-inch, 1.5-mile transmission main to convey 25 million gallons of water per day creating an additional source of water, and much needed redundancy to the critical Medical Center area; and
- (3) Leon Creek WRC Improvements and Upgrades (Phase 2) project at \$21.7 million which represents the final phase of upgrades/replacement of the critical infrastructure at the plant to include upgrade of the existing preliminary treatment facilities (headworks) that are ineffective and corroded, and the installation of new and up-to-date electrical, instrumentation and control systems.

2021 CAPITAL IMPROVEMENT PLAN SUMMARY

<i>Core Business</i>	<i>CIP Category / Project Title</i>	<i>Phase</i>	<i>Programmed Amount¹</i>
Water Delivery			
Corporate			
	General Legal Services	Acquisition	77,100
	Northeast Operations Center Project	Construction	14,443,400
	Owner Controlled Construction Changes (OCCC)	Construction	2,652,120
	Overhead	Overhead	10,750,000
	Corporate Total		27,922,620
Mains - New			
	30-inch Water Main along Lockhill-Selma to DeZavala	Construction	4,442,708
	American Lotus Pressure Zone Change	Design	35,980
	Hollywood Park-Hill Country Village PZ 1096 to PZ 1111 Interconnect	Design	154,817
	Park Forest Water Main Improvements	Construction	1,156,500
	Post Oak to Oaks Dr. and Autumn Dr. 8-inch Looped Water Mains	Design	616,800
	Pressure Zone (PZ) 1610 to PZ1400 Pressure Relief Valve	Design	154,200
	Project 3: IH10 PZ1400 Water Main - Phase A	Design	1,696,200
	Project 35: 24-inch Water Main to Integrate 1170 DSP to PZ1170	Design	976,600
	PZ1111 24-inch Transmission Main	Design	2,669,549
	Talley Road 12-inch PRV	Design	154,200
	Toutant-Beauregard Rd. Water Main Project	Design	1,387,800
	Turtle Creek #3 to Medical Center Transmission Main	Construction	9,252,000
	Water Main Oversizing	Construction	3,598,000
	Zigmont Rd 12-inch Water Main	Design	419,424
	Mains - New Total		26,714,778
Mains - Replacement			
	Governmental Mains	Construction	27,756,000
	Dead End Main Elimination via Looping	Construction	4,040,040
	Highland Hills Water Main Replacement	Construction	5,665,410
	Kiefer Road Water Main Replacement Project	Construction	1,439,200
	Rainbow Hills Water Main Replacement	Construction	3,231,963
	Ranchland Acres Water Main Replacement	Construction	1,975,980
	Summer Sun Ln. Water Main Replacement	Construction	1,846,185
	Valves, Services and Meter Replacements	Construction	16,448,000
	Water Main Replacement Work Order Engineering Contract	Design	976,600
	Mains - Replacement Total		63,379,379
Production			
	Broadband Access Pts. & Prog. Logic Controllers Replace – Ph. 3	Construction	2,056,000
	Broadband Access Pts. & Prog. Logic Controllers Replace – Ph. 4	Design	771,000
	Cagnon Ground Storage Tank Replacement	Construction	3,495,200
	DeZavala Storage Tank	Construction	7,454,439
	East Houston St. Pump Station Disinfection System Upgrades	Design	257,000
	Market Street Pump Station Disinfection System Upgrades	Design	514,000
	Market Street Pump Station Disinfection System Upgrades	Construction	5,140,000
	Phase 3 Water Production Facilities Disinfection System Upgrades	Construction	13,569,600
	Production Facilities Engineering Work Order Contract	Design	514,000
	Production Site Electrical Upgrades Phase 1	Design	585,960
	Sea World Ground Storage Tank Replacement	Construction	3,289,600
	Silver Mountain Pump Station	Construction	1,028,000
	Turtle Creek No. 3 Well Field, Gr. Stor. Tank, Well & High Speed Pumps	Construction	25,700,000
	Production Total		64,374,799
Water Delivery Total			\$ 182,391,576

¹ Includes 2.8% projected inflation

2021 CAPITAL IMPROVEMENT PLAN SUMMARY

<i>Core Business</i>	<i>CIP Category / Project Title</i>	<i>Phase</i>	<i>Programmed Amount¹</i>
Wastewater			
Corporate			
	General Legal Services	Acquisition	501,150
	Northeast Operations Center Project	Construction	14,443,400
	Owner Controlled Construction Changes (OCCC)	Construction	17,252,897
	Overhead	Overhead	14,750,000
	Corporate Total		46,947,447
Collection Facilities			
	2019 Lift Station Elimination (near Port San Antonio)	Construction	5,140,000
	Lift Station Rehabilitation Phase 5	Construction	11,822,000
	Collection Facilities Total		16,962,000
Mains - New			
	Classen Steubing New Bore Alignment	Construction	1,799,117
	Helotes Creek Gravity Main and Lift Station # 246 Elimination	Construction	17,409,832
	Sewer Main Oversizing	Construction	4,112,000
	Mains - New Total		23,320,949
Mains - Replacement			
	Governmental Mains	Construction	27,756,000
	2019 Small Capacity Constraints Package 1	Construction	8,232,373
	2019 Small Capacity Constraints Package 2	Construction	2,116,135
	C-18 McCullough Ave. Sewer Capacity Upsize, Birch Leaf to Oblate	Construction	3,906,400
	C-69 South Zarzamora Street Sewer Upsize and Relief	Construction	3,411,641
	Central Sewershed Package 10 (Terrell Hills)	Construction	1,556,392
	E-54 Sewer Main (Master Plan)	Construction	31,724,080
	E-74 Rosillo Creek Sewer Capacity Storage South of IH-10	Construction	4,523,200
	Inflow and Infiltration Reduction	Construction	10,280,000
	Main Replacements - Sewer - SAWS Crews	Construction	3,598,000
	Sewer Laterals	Construction	5,448,400
	Small and Large Diameter Condition Remedial Measures	Construction	64,764,000
	W-2 Huebner Creek: Eckhart to Bandera	Construction	14,083,600
	Wastewater Main Replacement Work Order Engineering Contract	Design	4,112,000
	Mains - Replacement Total		185,512,221
Treatment			
	Leon Creek WRC Electrical System Improvements – Phase 2	Design	411,200
	Leon Creek WRC Improvements and Upgrades Phase 2	Construction	21,691,977
	Leon Creek WRC Strain Presses and Hydraulic Upgrades	Design	514,000
	Steven M. Clouse WRC Blower System Improvements	Design	2,313,000
	Steven M. Clouse WRC Digester Mixing Improvements	Construction	18,504,000
	Steven M. Clouse WRC Electrical System Improvements - Phase 2 ad	Construction	4,112,000
	Treatment Facilities Engineering Work Order Contract	Design	514,000
	Water Recycling Center Headworks Phase 2 (Grit Improvements)	Construction	5,140,000
	Treatment Total		53,200,177
Wastewater Total			\$ 325,942,794

¹ Includes 2.8% projected inflation

2021 CAPITAL IMPROVEMENT PLAN SUMMARY

<i>Core Business</i>	<i>CIP Category / Project Title</i>	<i>Phase</i>	<i>Programmed Amount¹</i>
Water Supply			
Water Supply			
	Artesia - Pump Station Rehabilitation Phase 5	Construction	16,185,860
	Artesia Wells	Construction	9,252,000
	General Legal Services	Acquisition	12,850
	Overhead	Overhead	3,000,000
	Owner Controlled Construction Changes (OCCC)	Construction	2,313,750
Water Supply Total			30,764,460
Recycled Water			
Recycled Water			
	Brooks Recycled Water Pump Station Upgrade	Design	462,600
	Governmental Adjustments	Construction	205,600
	Leon to Clouse Recycled Water Interconnect	Design	1,028,000
	Recycled Water Customer Lines	Construction	205,600
	Recycled Water Overhead	Overhead	225,000
Recycled Water Total			\$ 2,126,800
Chilled Water			
Chilled Water			
	Chilled Water Overhead	Overhead	\$ 125,000
Chilled Water Total			\$ 125,000
Grand Total			\$ 541,350,630

¹ Includes 2.8% projected inflation

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CIP PROJECT DATA

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WATER DELIVERY

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**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-10897
Project:	General Legal Services - WD - 2021
Programmed Amount:	\$77,100
Core Business:	WD - Water Delivery
Category:	Corporate WD
Phase:	Acquisition
Council District:	System Wide
Description and Scope:	
Specialized legal support is required for critical projects.	
Justification:	
External legal support is sought only when there is insufficient internal legal staff to support the effort, or specialized legal expertise is required.	
Funding Information:	
Acquisition:	\$75,000 (2021)
Design:	
Construction:	
Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-10302
Project:	Northeast Operations Center Project - WD
Programmed Amount:	\$14,443,400
Core Business:	WD - Water Delivery
Category:	Corporate WD
Phase:	Construction
Council District:	District 10
Description and Scope:	
<p>Professional design-build services to hire the Architect and Engineer (A/E) team required to design and construct the New Northeast Operations Center which is Phase 3 of the Service Center Project. In January 2017 SAWS Board of Trustees approved the purchase of a new site located near the intersection of 1604 and Judson Rd. The selected contractor will design and build the new facility to include new administration, fleet, and supply buildings, fueling islands with above ground tanks, and associated site work, parking and materials storage areas. This firm will also, upon completion of the new facility, demolish the 30 year-old building and fuel tanks at the current site.</p>	
Justification:	
<p>Upon completion of this new site, SAWS field crews can vacate the administration building (circa 1981) at SAWS Nacogdoches pump station and SAWS can remove the underground fuel tanks at that production site, which will reduce risk.</p>	
Funding Information:	
Acquisition:	\$526,100 (2017)
Design:	\$771,000 (2019)
Construction:	\$14,050,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-10900
Project:	Water Delivery OCCC 2021
Programmed Amount:	\$2,652,120
Core Business:	WD - Water Delivery
Category:	Corporate WD
Phase:	Construction
Council District:	System Wide
Description and Scope:	
<p>Funds for Owner Controlled Construction Changes (OCCC) that may be requested by SAWS to offset unforeseen CIP project cost changes that may occur during the course of project execution in 2021. Funding amounts are determined by reviewing historical data and project schedules to determine the estimated amount needed for present and future years.</p>	
Justification:	
<p>Improve the monitoring and efficiency of construction changes. OCCC changes in excess of the amount required by Texas Local Government Code will continue to require Board approval in accordance with SAWS resolutions.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$2,579,883 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11475
Project:	Water Delivery Overhead 2021
Programmed Amount:	\$10,750,000
Core Business:	WD - Water Delivery
Category:	Corporate WD
Phase:	Construction
Council District:	System Wide
Description and Scope:	
<p>SAWS overhead costs cover the direct costs associated with SAWS personnel that manage and support CIP projects during the capitalizable phases of the project. The overhead costs were calculated primarily using the capitalized costs from staff time charged using the CIP Time Tracker on an annualized basis and analyzing the remaining 2020 and prior year CIP projects and the future 2021 CIP projects.</p>	
Justification:	
<p>Overhead costs are applied to SAWS personnel costs in order to capture direct incremental costs associated with SAWS personnel that support the development and construction of CIP projects.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$10,750,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11741
Project:	30-inch Water Main along Lockhill-Selma to DeZavala EST
Programmed Amount:	\$4,442,708
Core Business:	WD - Water Delivery
Category:	WD - Mains New - Water
Phase:	Construction
Council District:	District 08
Description and Scope:	
<p>This project will include approximately one mile of 30" main from the existing 20" main at the intersection of Lockhill Selma and Huebner to the projected DeZavala elevated storage tank (EST) that will also be constructed in 2022.</p>	
Justification:	
<p>This project will connect the new DeZavala EST to SAWS water distribution system, as well as improve transmission efficiency in Pressure Zone 1111.</p>	
Funding Information:	
Acquisition:	
Design:	\$585,960 (2020)
Construction:	\$4,321,700 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11462
Project:	American Lotus Pressure Zone Change
Programmed Amount:	\$35,980
Core Business:	WD - Water Delivery
Category:	Mains New - Water
Phase:	Design
Council District:	OCL
Description and Scope:	
<p>This project will move 511 customers in the American Lotus and Seale subdivisions from Pressure Zone (PZ) 994 to PZ1080 to alleviate low pressure concerns. PZ1080 pressure will cause 390 customers to experience pressures over 80 pounds per square inch (psi). SAWS will pay for new pressure reducing valves (PRVs) and thermal expansion tanks (TETs) for these customers.</p>	
Justification:	
<p>Many customers are below 35 psi, a level which does not meet TCEQ regulations for minimum water pressure.</p>	
Funding Information:	
Acquisition:	
Design:	\$35,000 (2021)
Construction:	\$235,000 (2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10745
Project: Hollywood Park-Hill Country Village PZ 1096 to PZ 1111 Interconnect
Programmed Amount: \$154,817
Core Business: WD - Water Delivery
Category: Mains New - Water
Phase: Design
Council District: District 09, OCL

Description and Scope:

This project will design a new 12-inch water line along San Pedro Avenue connecting the existing 12-inch line along San Pedro Avenue near Bexar Crossing to the existing 12-inch lines along Pantheon Way and Mecca Drive. It will include a Master PRVs and/or individual customer PRVs to go from PZ 1111 to PZ 1096 prior to opening up the valves and demolishing the Tower Drive standpipe in Hill Country Village. This project will be evaluated by the SAWS Pressure Zone Change Committee to select the most cost efficient alternative.

Justification:

Currently, PZ 1096 operates completely independently of PZ 1111. To simplify operations and to provide the PZ 1096 area with a more reliable supply, it is recommended to connect the two pressure zones.

Funding Information:

Acquisition:
Design: \$150,600 (2021)
Construction: \$1,003,500 (2023)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW	
Project ID:	Pro-11416
Project:	Park Forest Water Main Improvements
Programmed Amount:	\$1,156,500
Core Business:	WD - Water Delivery
Category:	Mains New - Water
Phase:	Construction
Council District:	District 08
Description and Scope:	
<p>This project will install approximately 1,400 linear feet of 24-inch water main for PZ 1111 along Lockhill-Selma from Huebner Rd. to Orsinger Lane, and 500 linear feet of 12-inch water main for PZ 1170 along Lockhill-Selma from Huebner Rd. to Queens Forest. The estimated total length of the water mains is 1,900 linear feet.</p>	
Justification:	
<p>The purpose of this project is to convert customers to PZ1170 water from PZ1111 which will serve to eliminate these pressure and low flow problems. The project will also improve transmission efficiency in PZ 1111 for SAWS.</p>	
Funding Information:	
Acquisition:	
Design:	\$61,680 (2020)
Construction:	\$1,125,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-10744
Project:	Post Oak to Oaks Dr. and Autumn Dr. 8-inch Looped Water Mains
Programmed Amount:	\$616,800
Core Business:	WD - Water Delivery
Category:	Mains New - Water
Phase:	Design
Council District:	OCL
Description and Scope:	
<p>This project will design approximately 2.3 miles of new 8-inch water lines replacing existing 2-inch water lines along Post Oak, Live Oak Road, Oaks Drive, Bluewin Lane, Sundown Lane, Deer Run Lane, and Autumn Lane in SAWS service area in Atascosa County.</p>	
Justification:	
<p>This project will improve pressures during periods of peak demand. This project is impact fee eligible.</p>	
Funding Information:	
Acquisition:	
Design:	\$600,000 (2021)
Construction:	\$2,654,400 (2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW	
Project ID:	Pro-11448
Project:	Pressure Zone 1610 to Pressure Zone 1400 Pressure Relief Valve
Programmed Amount:	\$154,200
Core Business:	WD - Water Delivery
Category:	Mains New - Water
Phase:	Design
Council District:	OCL
Description and Scope:	
This project will design the installation of a pressure reducing valve and vault near the intersection of Sable Run and Millstone Cove and establish a new division valve along Lost Creek Gap near IH-10W.	
Justification:	
This project is required to meet TCEQ regulations of a minimum of 35 psi during peak demands in a region experiencing significant growth. This project is impact fee eligible.	
Funding Information:	
Acquisition:	
Design:	\$150,000 (2021)
Construction:	\$700,000 (2023)
Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.	

SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET

PROJECT OVERVIEW

Project ID: Pro-11449
Project: Project 3: IH10 PZ1400 Water Main - Phase A
Programmed Amount: \$1,696,200
Core Business: WD - Water Delivery
Category: Mains New - Water
Phase: Design
Council District: District 08

Description and Scope:

Design work associated with Master Plan Project 3 along the IH-10 corridor. Modeling suggests the upper section of this project will likely make more significant improvements to the pressure status in the northern reach of Pressure Zone 1400W. The current plan is to upsize the existing 20" main to a 36" main along the eastern right-of-way of Interstate Highway (IH)-10 from the intersection of Heuermann and IH-10 to the intersection of Boerne Stage Rd. and IH-10. Phase B will be constructed in 2024.

Justification:

This project is required to meet TCEQ regulations of a minimum of 35 psi during peak demands in a region experiencing significant growth. This project is impact fee eligible.

Funding Information:

Acquisition:
Design: \$1,650,000 (2021)
Construction: \$16,500,000 (2023)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11450
Project:	Project 35: 24-inch Water Main to Integrate 1170 DSP to PZ1170
Programmed Amount:	\$976,600
Core Business:	WD - Water Delivery
Category:	Mains New - Water
Phase:	Design
Council District:	OCL
Description and Scope:	
<p>This project will design a 24-inch main from the intersection of Louis Augusta and Talley Road to Stevens Parkway and Tapia Way, integrating District Special Project (DSP) Pressure Zone 1170 to SAWS Pressure Zone 1170. This project is part of the Stephens Ranch Utility Service Agreement.</p>	
Justification:	
<p>This project is crucial to accomplish the integration of DSP PZ 1170 with SAWS PZ 1170. DSP PZ 1170 is supplied with water produced at Texas Research Park Pump Station and Stevens Pump Station. The Texas Research Park Pump Station is experiencing operational issues that may compromise its ability to provide needed capacity. The integration will allow for the distribution of water produced at the Roft and Anderson Pump Stations to supply water to reach this area.</p>	
Funding Information:	
Acquisition:	
Design:	\$950,000 (2021)
Construction:	\$9,500,000 (2023)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11346
Project: PZ1111 24-inch Transmission Main
Programmed Amount: \$2,669,549
Core Business: WD - Water Delivery
Category: Mains New - Water
Phase: Design
Council District: District 08, District 09

Description and Scope:

This project consists of approximately 1.8 miles of 24-inch water main along Wurzbach Parkway between Blanco and Lockhill-Selma and approximately 1.4 miles of 24-inch water main along Lockhill-Selma between Wurzbach Pkwy and Huebner. This project is required to improve transmission efficiency between the Bitters booster station and the projected DeZavala elevated tank, as well as within PZ 1111. Moving from PZ 7 to PZ 8 requires constructing approximately 1,000 feet of 8-inch distribution main within Park Forest Subdivision and 700 feet of 12-inch distribution main along Lockhill Selma from just north of Huebner to Queens Forest.

Justification:

This project is required to improve transmission efficiency between the Bitters booster station and the projected DeZavala elevated tank, as well as within PZ 1111. Without this transmission main the tank will not be able to fill and customers in the PZ 1111 (PZ 7) area will continue to fall below 35 psi during high demand seasons.

Funding Information:**Acquisition:**

Design: \$2,596,838 (2021)
Construction: \$16,463,616 (2023)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-10746
Project:	Talley Road 12-inch PRV
Programmed Amount:	\$154,200
Core Business:	WD - Water Delivery
Category:	Mains New - Water
Phase:	Design
Council District:	OCL
Description and Scope:	
Design work for a master planning project which will install a new 12-inch PRV serving PZ 1044 from PZ 1111. A related project is installing a water main along Talley Road and will place a temporary division valve until the PRV can be installed.	
Justification:	
The project will include a site investigation, survey, environmental studies, possible easement acquisition, electrical and SCADA work, and design and construction services. This project is impact fee eligible.	
Funding Information:	
Acquisition:	
Design:	\$150,000 (2021)
Construction:	\$700,000 (2023)
Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11447
Project: Toutant-Beauregard Rd. Water Main Project
Programmed Amount: \$1,387,800
Core Business: WD - Water Delivery
Category: Mains New - Water
Phase: Design
Council District: OCL

Description and Scope:

This project consists of designing the replacement of approximately two miles of 20-inch water main from Toutant-Beauregard Road near Cielo Vista North Elementary School through large parcels of land across multiple creeks in order to connect to an existing 24-inch water main along Boerne Stage Rd. and Sage Creek, in the far northwest part of Bexar County. This project will require easements for 80% of the pipe alignment.

The project also includes further evaluation of existing water mains, and main break history, along Toutant-Beauregard Road and Boerne Stage Road to determine causes of failures as well as hydraulic, transient, and fatigue analysis data verification and possibly forensic analysis. Some existing water mains may require replacement based on the outcome of the evaluations.

Justification:

Existing subdivisions along Toutant-Beauregard Road are being fed by a single 16-inch PVC water main in PZ 1610, which is considered a high pressure zone. Due to inadequate infrastructure, and the lack of a redundant feed, the existing water main has experienced multiple failures that impact entire neighborhoods for days. As a result of these failures, boil water notices have been issued in order to comply with TCEQ regulations due to loss of pressure. In addition, SAWS has to provide bottled water for all of the affected customers. This project will add a redundant feed which will help minimize the risk of future main breaks and having customers out of water for long periods of time.

Funding Information:

Acquisition: \$800,000 (2021)
Design: \$550,000 (2021)
Construction: \$5,500,000 (2023)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW	
Project ID:	Pro-00079
Project:	Turtle Creek No 3 Pump Station to Medical Center Transmission Main
Programmed Amount:	\$9,252,000
Core Business:	WD - Water Delivery
Category:	Mains New - Water
Phase:	Construction
Council District:	District 08
Description and Scope:	
<p>This project will provide for a new 42-inch, 1.5 mile transmission main to convey 25 million gallons of water per day from the projected Turtle Creek #3 primary pump station to an existing 24-inch main on Fredericksburg Road, which will provide flows to Medical Tank and the Medical Center Area. It will provide an additional source of water, and much needed redundancy to this highly critical area.</p>	
Justification:	
<p>SAWS Master Planning determined that the best way to convey water to the higher elevations in the northwest area is through the Anderson and University pump stations. The large main from Anderson to University is already in place. This water will reach the University Pump Station on a future project. This project is impact fee eligible.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$9,000,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW	
Project ID:	Pro-10903
Project:	Water Main Oversizing 2021 - SAWS
Programmed Amount:	\$3,598,000
Core Business:	WD - Water Delivery
Category:	Mains New - Water
Phase:	Construction
Council District:	System Wide
Description and Scope:	
<p>Funds are required for SAWS proportionate share of the cost of mains which are necessary to serve anticipated growth but are larger than the size main required by a developer customer or single customer. Developers are required to build necessary offsite infrastructure to meet the needs of their development. When growth is projected in adjacent tracts, SAWS contributes money to increase the size of the mains to serve the additional growth. Sharing in the cost is beneficial to both SAWS and the developer and prevents the construction of parallel smaller sized mains.</p>	
Justification:	
<p>Participating in oversizing is a cost effective way to meet the needs of growth. It is funded by impact fees collected from new development.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$3,500,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-10743
Project:	Zigmont Rd 12-inch Water Main
Programmed Amount:	\$419,424
Core Business:	WD - Water Delivery
Category:	Mains New - Water
Phase:	Design
Council District:	OCL
Description and Scope:	
<p>This project will design a new 12-inch water line along Zigmont Road, replacing the existing 6-inch water line. The new main will connect the existing 8-inch water line along Real Road to the existing 6-inch along FM 1346.</p>	
Justification:	
<p>This project provides capacity for projected growth and a redundant supply for western PZ 828. This project is impact fee eligible.</p>	
Funding Information:	
Acquisition:	
Design:	\$408,000 (2021)
Construction:	\$2,719,400 (2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW	
Project ID:	Pro-10906
Project:	Governmental Water 2021
Programmed Amount:	\$27,756,000
Core Business:	WD - Water Delivery
Category:	Governmental Water
Phase:	Construction
Council District:	System Wide
Description and Scope:	
<p>The governmental program consists of projects implemented in conjunction with other government agencies infrastructure work. The program includes replacement of water mains in poor condition, adjustment of water mains whose existing alignment conflicts with proposed new street alignment, and installation of new water mains needed to provide additional capacity. SAWS participates in the Utility Coordination Council, and jointly plans and reviews infrastructure improvements with COSA, Bexar County, CPS Energy, TXDOT, AT&T, and other agencies, to maximize effectiveness of public infrastructure</p>	
Justification:	
<p>Replacing and/or adjusting aging infrastructure in conjunction with other agencies planned street work is the most cost effective approach to infrastructure management. It minimizes the cost of construction and minimizes the potential of utility failure under a new street.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$27,000,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11510
Project: Dead End Main (DEM) Elimination via Looping 2021
Programmed Amount: \$4,040,040
Core Business: WD - Water Delivery
Category: Main Replacement - Water
Phase: Construction
Council District: System Wide

Description and Scope:

The Dead End Main (DEM) Flushing Program is a required program to meet Texas Commission on Environmental Quality (TCEQ) regulations, 30 Texas Administrative Code (TAC) Chapter 290.46. There are more than 9,000 dead end mains in the SAWS distribution system. Approximately 195 of these dead end mains were requested to be reviewed for abandonment or elimination due to potential quality issues resulting from the mains not holding chlorine residual, which cannot be addressed with auto-flushers. The design consultant for this project is preparing plans to eliminate 26 of the dead end water mains that were reviewed and determined to be the most practical. This funding will be to continue the construction work of eliminating these DEM's. The duration is recurring depending on changes to TCEQ requirements. This is year 3 of at least a 5 year effort.

Justification:

TCEQ highly encourages DEM's to be eliminated where practical. Implementation of the DEM Looping Project will reduce the overall number of DEM's required to be flushed. Failure to implement eliminating DEM's where practical may negatively impact future negotiations and put the current negotiated agreement at risk.

Eliminating DEM's where practical will reduce staff time in flushing these sites. Some of the sites identified for looping have a higher frequency flushing requirement.

Funding Information:

Acquisition:
Design:
Construction: \$3,930,000 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW	
Project ID:	Pro-11307
Project:	Highland Hills Water Main Replacement Project
Programmed Amount:	\$5,665,410
Core Business:	WD - Water Delivery
Category:	Main Replacement - Water
Phase:	Construction
Council District:	District 03
Description and Scope:	
Replacement of approximately two miles of existing 6-inch and 8-inch water mains with new 8-inch water mains in the Highland Hills neighborhood. Water mains will be replaced along St. Anthony Dr., Haggin St., Astor Ln., Topeka Blvd., Chicago Blvd., Halliday Ave., Carol Ann Dr., Ada St., and Sandra St.	
Justification:	
SAWS engineering has requested the replacement of this pipeline due to a high likelihood of failure when compared to the rest of the water distribution system. This is due to a combination of pipe age, pipe material, surrounding soil type, and main break history. The replacement of the pipe is considered a proactive approach which will save SAWS funds for repair and rehabilitation in the future.	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$5,511,100 (2021)
Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11426
Project: Kiefer Road Water Main Replacement Project
Programmed Amount: \$1,439,200
Core Business: WD - Water Delivery
Category: Main Replacement - Water
Phase: Construction
Council District: District 02

Description and Scope:

Installation of about one mile of 12-inch polyvinyl chloride (PVC) water main along Kiefer Road to replace an existing 6-inch concrete water main, from north of E. Houston St. to Lancer Dr. Additionally, the project will install approximately one-quarter mile of new 12-inch PVC water main to an existing SAWS main on Cal Turner. All existing water services will be relayed to the new water main.

Justification:

The existing main is undersized and in poor condition. It is in need of replacement. At the same time, this project will tie in to an existing dead end main on Cal Turner Blvd, thus eliminating the dead end.

Funding Information:

Acquisition:
Design:
Construction: \$1,400,000 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11308
Project:	Rainbow Hills Water Main Replacement
Programmed Amount:	\$3,231,963
Core Business:	WD - Water Delivery
Category:	Main Replacement - Water
Phase:	Construction
Council District:	District 04
Description and Scope:	
<p>The project will install approximately 1.4 miles of 8-inch water main. The water main will be installed along Merritt Dr., Kernan Dr., Maddux Dr., Scates Dr., Berry Hill, Bertetti Dr., Mahota Dr., and Hatfield Dr. in the Rainbow Hills neighborhood.</p>	
Justification:	
<p>SAWS engineering has requested the replacement of this pipeline due to a high likelihood of failure when compared to the rest of the water distribution system. This is due to a combination of pipe age, pipe material, surrounding soil type, and main break history. The replacement of the pipe is considered a proactive approach which will save SAWS funds for repair and rehabilitation in the future.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$3,143,933 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11306
Project: Ranchland Acres Water Main Replacement
Programmed Amount: \$1,975,980
Core Business: WD - Water Delivery
Category: Main Replacement - Water
Phase: Construction
Council District: OCL

Description and Scope:

The project will install approximately 2,000 linear feet of 8-inch water main and relay existing water services from main to meter. The water main will be installed along the perimeter of the block formed by West Ave, Ranchland Drive, Roundup Drive, and Adobe Drive. The project also includes the replacement of approximately 2,200 linear feet of 16-inch water main along McNeel Road from Erskine Place to Sladen Drive. In addition, dead-end water mains on Shadwell/St. Cloud and Donaldson Avenue.

Justification:

SAWS Engineering has requested the replacement of these pipelines due to a high likelihood of failure when compared to the rest of the water distribution system. This is due to a combination of pipe age, pipe material, surrounding soil type, and main break history. The replacement of the pipes is considered a proactive approach which will save SAWS cost for repair and rehabilitation in the future.

Funding Information:

Acquisition:
Design:
Construction: \$1,922,160 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11399
Project:	Summer Sun Ln. Water Main Replacement Project
Programmed Amount:	\$1,846,185
Core Business:	WD - Water Delivery
Category:	Main Replacement - Water
Phase:	Construction
Council District:	District 02
Description and Scope:	
<p>This project involves replacement of approximately 1.3 miles of 6-inch and 8-inch concrete water mains with new 8-inch water mains due to frequent water main failures that have occurred in the area. The water main replacement work will occur in the Garden Court East/Sungate neighborhood. Water mains to be replaced will be in the right-of-ways of Daybreak Drive, Summer Sun Lane, Bright Sun, Sun Shadow Street, Sunnyvale Lane, and Summer Wind.</p>	
Justification:	
<p>SAWS engineering has requested the replacement of this pipeline due to a high likelihood of failure when compared to the rest of the water distribution system. This is due to a combination of pipe age, pipe material, surrounding soil type, and main break history. The replacement of the pipe is considered a proactive approach which will save SAWS cost for repair and rehabilitation in the future.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$1,795,900 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-10910
Project:	Valves Services and Meter Replacements - SAWS - 2021
Programmed Amount:	\$16,448,000
Core Business:	WD - Water Delivery
Category:	Main Replacement - Water
Phase:	Construction
Council District:	System Wide
Description and Scope:	
<p>This project funds the replacement of water mains, valves, hydrants, and meters within the SAWS distribution system. When infrastructure fails, it is evaluated to determine the best repair method. When replacement is necessary, it is evaluated to determine whether replacement by SAWS crews or a contractor would be more effective and efficient.</p>	
Justification:	
<p>Replacement work is necessary to restore service and is more efficient than repair.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$16,000,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-10911
Project:	Water Main Replacement Work Order Engineering Contract - SAWS - 2021
Programmed Amount:	\$976,600
Core Business:	WD - Water Delivery
Category:	Main Replacement - Water
Phase:	Design
Council District:	System Wide
Description and Scope:	
<p>This annual project will fund design services to repair/replace water mains that have experienced a high rate of main failure. These projects vary in size and location, and may require the solicitation of contractor construction services on an urgent basis. The projects will replace sub-standard or deteriorated water mains requiring immediate replacements.</p>	
Justification:	
<p>Design of mains to be replaced or repaired is necessary to restore and maintain water service. This line item includes funding for design of projects identified as part of the Water Risk and Condition Assessment being performed by Arcadis.</p>	
Funding Information:	
Acquisition:	
Design:	\$950,000 (2021)
Construction:	
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET

PROJECT OVERVIEW

Project ID: Pro-10803
Project: Broadband Access Points and Programmable Logic Controllers Replacement – Phase 3
Programmed Amount: \$2,056,000
Core Business: WD - Water Delivery
Category: Production
Phase: Construction
Council District: System Wide

Description and Scope:

This project (Phase 3) will replace aging radio communication system used to receive data from the water production and pumping stations with new wireless communication infrastructure to upgrade communication capability and replace obsolete control equipment. More than 100 water production facilities are controlled and operated from a central control point. The existing equipment is old and some components are no longer supported by the manufacturer. The radio systems have an expected lifespan of 7 years. The existing systems have been in use for 10 to 20 years.

Phase 2 is currently in construction at a cost of \$4.2 million. Phase 3 is currently in design at a design fee of \$876,000. Funding is needed in 2021 for an increase in scope to accommodate structural modifications for communications equipment.

Justification:

The master plan for upgrade of the SCADA system recommends this upgrade. Phase 3 will address the Programmable Logic Controllers (PLC) and radios at 30 additional Water Production facilities. These PLCs and radios need to be replaced as part of this Project due to staffing limitations that preclude this work from being done in-house. Additionally, upgrades to the chlorine leak monitoring system at 38 Water Production facilities will be done. These upgrades are necessary to provide comprehensive and remote monitoring of the chlorine system at these facilities. Additional funding is required in 2021 to accommodate structural modifications for the communications equipment. This allows staff to maintain operational continuity and respond to events safely.

Funding Information:**Acquisition:****Design:**

Construction: \$3,000,000 (2020)
\$2,000,000 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11043
Project: Broadband Access Points and Programmed Logic Controllers Replacement - Phase 4
Programmed Amount: \$771,000
Core Business: WD - Water Delivery
Category: Production
Phase: Design
Council District: System Wide

Description and Scope:

This project (Phase 4) will provide the design to replace the aging radio communication system used to receive data from the water production, pumping stations, and water production pressure point sites with new wireless communication infrastructure to upgrade communication capability and replace obsolete control and monitoring equipment. More than 100 water production facilities are controlled, operated and monitored from a central control point. Phase 4 will consist of more than 45 facilities. The existing equipment is old and some components are no longer supported by the manufacturer. The radio systems have an expected lifespan of 15 years. The existing controllers have an expected lifespan of 7 years.

The upgrades will increase efficiency by allowing development of standardized, automated control strategies for stopping and starting pumping equipment based on equipment efficiency, customer demand patterns and energy costs. Additionally, control and monitoring equipment can be programmed from the control center at headquarters through the broadband system, reducing the labor time involved in driving to the pump station, and the time for a signal to be sent to the pump station will be greatly reduced.

Justification:

The master plan for upgrade of the SCADA system recommends this upgrade. Phase 4 will address the facilities that were unable to be completed by in-house staff, as well as water production pressure point sites. Phase 1 construction began in 2017 at a current cost of \$5.0 million, and will address the high criticality facilities. Phase 2 is currently in design at a cost of \$825,000. Phase 3 is currently planned for construction in 2021 at an estimated cost of \$5 million. Phase 5 is currently planned for construction in 2024 at an estimated cost of \$3.5 million.

Funding Information:

Acquisition:
Design: \$750,000 (2021)
Construction: \$3,500,000 (2022)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11517
Project:	Cagnon Ground Storage Tank Replacement
Programmed Amount:	\$3,495,200
Core Business:	WD - Water Delivery
Category:	Production
Phase:	Construction
Council District:	OCL
Description and Scope:	
<p>The project consists of the demolition of a welded steel ground storage tank and the construction of a new pre-stressed concrete ground storage tank, overflow structure, tank inlet and outlet piping, valves, and grading. Project also includes a pipeline coming from the Water Supply Integration Pipeline (WRIP), a PRV structure, and piping modifications inside the facility required to feed existing pumps. Site security, miscellaneous electrical and SCADA systems are also part of the project.</p>	
Justification:	
SAWS received a Notice of Violation on this tank from TCEQ, and committed to replace the tank in 2021.	
Funding Information:	
Acquisition:	
Design:	\$340,000 (2020)
Construction:	\$3,400,000 (2021)
Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-00020
Project: DeZavala Elevated Storage Tank
Programmed Amount: \$7,454,439
Core Business: WD - Water Delivery
Category: Production
Phase: Construction
Council District: District 08

Description and Scope:

This project will design a new 2.5 million gallon elevated water storage tank for Pressure Zone 1111 (formerly PZ 7). This pressure zone serves a large area both east and west of Interstate 10, and this master planned water storage tank will accommodate future growth in the pressure zone. The project will be designed in 2020 and constructed in 2021. In 2019, SAWS acquired land at the intersection of DeZavala Rd. and Indian Wood Rd. to construct the tank.

Justification:

This project is required by SAWS Master Planning to address future growth in a rapidly growing part of the city. It also addresses TCEQ's requirement for elevated storage tank within each pressure zone. This project will help provide a consistent pressure within the pressure zone and minimize fluctuation in pressure during distribution of water.

Funding Information:

Acquisition:
Design: \$620,000 (2020)
Construction: \$7,251,400 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11515
Project:	East Houston St. Pump Station Disinfection System Upgrades
Programmed Amount:	\$257,000
Core Business:	WD - Water Delivery
Category:	Production
Phase:	Design
Council District:	District 02
Description and Scope:	
<p>Project to design the complete replacement of the chlorine gas disinfection system at the East Houston Street Pump Station. The scope of this project includes the replacement of the system with either bulk sodium hypochlorite at the site or an alternate disinfection system at an offsite facility that can provide a chlorine residual as required by the TCEQ. A new building will be required in order to house the new disinfection system.</p>	
Justification:	
<p>The pump station currently has a chlorine gas disinfection system that is used to maintain chlorine residual in the water per TCEQ requirements.</p>	
Funding Information:	
Acquisition:	
Design:	\$250,000 (2021)
Construction:	\$2,500,000 (2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11516
Project: Market Street Pump Station Disinfection System Upgrades
Programmed Amount: \$514,000
Core Business: WD - Water Delivery
Category: Production
Phase: Design
Council District: District 01

Description and Scope:

Project to design the complete replacement of the chlorine disinfection system with either bulk sodium hypochlorite or an on-site generation sodium hypochlorite system that is sized to handle the pump station's maximum well pump capacity. Given the pump station is located Downtown in the historical district, there will be a need to build a new building to house the new disinfection system.

Justification:

The current disinfection system at the Market St. Pump Station is outdated, antiquated and is in need of complete replacement. This system has reached its intended design life. Production personnel have spent significant time at this facility, on a regular basis, to make repairs and troubleshoot. There have been leaks on the storage tanks which caused the entire pump station to be out of service.

Funding Information:

Acquisition:
Design: \$500,000 (2021)
Construction: \$5,000,000 (2022)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11209
Project: Phase 3 Water Production Facilities Disinfection System Upgrades
Programmed Amount: \$13,569,600
Core Business: WD - Water Delivery
Category: Production
Phase: Construction
Council District: District 02, District 03

Description and Scope:

This project will replace the chlorine gas system with on-site sodium hypochlorite generation as a disinfectant for potable water. Sodium hypochlorite is a non-hazardous chemical. The two pump stations in Phase 3 are the Micron and Seale pump stations. They will be upgraded in 2021.

This is Phase 3 of the Water Production Facilities Disinfection System Upgrades projects. Phase 1, which included Jones Maltzberger, Wurzbach and Marbach Pump Stations, was constructed in 2014. The total cost of that project was \$14.6 million. Phase 2, which includes Artesia Pump Station, was constructed in 2018 at a cost of \$8.6 million.

Justification:

The project will reduce the risk level by replacing chlorine gas disinfection systems with bulk sodium hypochlorite and continuing to provide a chlorine residual as required by the TCEQ.

Funding Information:**Acquisition:**

Design: \$1,390,950 (2019)

Construction: \$13,200,000 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW	
Project ID:	Pro-10912
Project:	Production Facilities Engineering Work Order Contract 2021
Programmed Amount:	\$514,000
Core Business:	WD - Water Delivery
Category:	Production
Phase:	Design
Council District:	System Wide
Description and Scope:	
<p>The San Antonio Water System periodically has a need for general types of projects that entail evaluation, rehabilitation, improvement upgrades, addition/demolition, replacement/expansion of equipment and facilities. These include:</p> <ul style="list-style-type: none"> • water production primary and secondary pump station facilities • elevated storage tank and ground storage tank sites • transmission mains (20-inch diameter and larger) • valve & control valve replacement, yard piping, electrical upgrades, SCADA, programming • other related projects of similar nature as above <p>The scope of work may include, but is not limited to, geotechnical and field survey, potholing and subsurface utility investigation, right of way services, permit application assistance, public meetings/hearings attendance, coordination with other utilities, agencies and consultants, civil, structural, mechanical, electrical and environmental services related to potable water facilities, preliminary engineering evaluation and recommendations, preparation of design plans, specifications, cost estimates, and bid documents, assistance during construction by reviewing contractor submittals and shop drawings, preparation of pay estimates, participating in equipment performance testing, final inspection and project completion and other construction phase services.</p>	
Justification:	
<p>This Work Order Contract will be on an "as-needed" basis, and the scope of the services will depend on the nature of each individual project. A work order will be issued upon identification of a project and determination of its scope and schedule.</p>	
Funding Information:	
Acquisition:	
Design:	\$500,000 (2021)
Construction:	
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11446
Project:	Production Site Electrical Projects Phase 1
Programmed Amount:	\$585,960
Core Business:	WD - Water Delivery
Category:	Production
Phase:	Design
Council District:	District 04, OCL
Description and Scope:	
Project to design the first phase of several phases of electrical upgrades at aging former BexarMet pump stations. The first three pump stations are Tippecanoe, Bear Creek, and Bear Springs.	
Justification:	
The pump stations are aging and in need of electrical upgrades.	
Funding Information:	
Acquisition:	
Design:	\$570,000 (2021)
Construction:	\$3,749,100 (2022)
Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11518
Project:	Sea World Ground Storage Tank Replacement
Programmed Amount:	\$3,289,600
Core Business:	WD - Water Delivery
Category:	Production
Phase:	Construction
Council District:	District 06
Description and Scope:	
This project will replace the Sea World Ground Storage Tank with a pre-stressed concrete tank.	
Justification:	
SAWS received a Notice of Violation on this tank from TCEQ and committed to replace the tank in 2021.	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$3,200,000 (2021)
Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW	
Project ID:	Pro-11263
Project:	Silver Mountain Pump Station
Programmed Amount:	\$1,028,000
Core Business:	WD - Water Delivery
Category:	Production
Phase:	Construction
Council District:	OCL
Description and Scope:	
<p>This project includes the demolition of existing concrete slabs, skid-mounted pump station, underground piping, electrical service lines, poles, equipment, duct banks, cabinets, and conduits. It will also install a new 50,000 gallon ground storage tank, a booster station, hydropneumatics tank, and update the electrical system and SCADA system.</p>	
Justification:	
<p>SAWS received a Notice of Violation on the existing storage tank from TCEQ and committed to replace the tank in 2021. In addition, the electrical service is over thirty years old and requires replacement in order to bring it up to NEC Code. The booster station is undersized and not working efficiently.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$1,000,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11453
Project: Turtle Creek No. 3 Primary Pump Station
Programmed Amount: \$25,700,000
Core Business: WD - Water Delivery
Category: Production
Phase: Construction
Council District: District 08

Description and Scope:

This project includes pump station improvements, which will provide water to the densely populated Medical Center area. This project, identified in the 2008 Water Infrastructure Plan, will result in a new 12.5 million gallon per day PZ 8 primary pump station with a 5 million gallon storage tank. Additionally, the pump station will have the capability to be expanded in the future to 25 million gallons per day, pending a new pipeline which would allow the utilization of that full capacity. The station will be located at the same site as the existing Turtle Creek #3 pump station, currently consisting of only one small well. By a different project, a water transmission main will be constructed in 2021 to convey water from the pump station to the Medical Center area.

Justification:

The improved pump station will provide additional service to the Medical Center area. This critical area is currently served by the small Turtle Creek #2 primary pump station, and the Dreamhill and Turtle Creek #3 secondary wells. The failure of any, or a combination, of these three wells would seriously affect SAWS' ability to maintain reliable water service to the Medical Center area.

Funding Information:

Acquisition:
Design:
Construction: \$25,000,000 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

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WASTEWATER

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**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-10898
Project:	General Legal Services - WW - 2021
Programmed Amount:	\$501,150
Core Business:	WW - Wastewater
Category:	Corporate WW
Phase:	Acquisition
Council District:	System Wide
Description and Scope:	
Specialized legal support is required for critical projects.	
Justification:	
External legal support is sought only when there is insufficient internal legal staff to support the effort, or specialized legal expertise is required.	
Funding Information:	
Acquisition:	\$487,500 (2021)
Design:	
Construction:	
Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-10303
Project:	Northeast Operations Center Project - WW
Programmed Amount:	\$14,443,400
Core Business:	WW - Wastewater
Category:	Corporate WW
Phase:	Construction
Council District:	District 10
Description and Scope:	
<p>Professional design-build services to hire the Architect and Engineer (A/E) team required to design and construct the New Northeast Operations Center which is Phase 3 of the Service Center Project. In January 2017 SAWS Board of Trustees approved the purchase of a new site located near the intersection of 1604 and Judson Rd. The selected contractor will design and build the new facility to include new administration, fleet, and supply buildings, fueling islands with above ground tanks, and associated site work, parking and materials storage areas. This firm will also, upon completion of the new facility, demolish the 30 year old building and fuel tanks at the current site.</p>	
Justification:	
<p>Upon completion of this new site, SAWS field crews can vacate the administration building (circa 1981) at SAWS Nacogdoches pump station and SAWS can remove the underground fuel tanks at that production site, which will reduce risk.</p>	
Funding Information:	
Acquisition:	\$526,100 (2017)
Design:	\$771,000 (2019)
Construction:	\$14,050,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-10901
Project:	Wastewater OCCC 2021
Programmed Amount:	\$17,252,897
Core Business:	WW - Wastewater
Category:	Corporate WW
Phase:	Construction
Council District:	System Wide
Description and Scope:	
Funds for construction changes requested by SAWS. Funding amounts are determined by reviewing historical data and project schedules to determine the estimated amount needed for present and future years.	
Justification:	
Improve the monitoring and efficiency of construction changes. OCCC changes in excess of the amount required by Texas Local Government Code will continue to require Board approval in accordance with SAWS resolutions.	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$16,782,974 (2021)
Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11480
Project:	Wastewater Overhead 2021
Programmed Amount:	\$14,750,000
Core Business:	WW - Wastewater
Category:	Corporate WW
Phase:	Construction
Council District:	System Wide
Description and Scope:	
<p>SAWS overhead costs cover the direct costs associated with SAWS personnel that manage and support CIP projects during the capitalizable phases of the project. The overhead costs were calculated primarily using the capitalized costs from staff time charged using the CIP Time Tracker on an annualized basis and analyzing the remaining 2020 and prior year CIP projects and the future 2021 CIP projects.</p>	
Justification:	
<p>Overhead costs are applied to SAWS personnel costs in order to capture direct incremental costs associated with SAWS personnel that support the development and construction of CIP projects.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$14,750,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW	
Project ID:	Pro-11313
Project:	2019 Lift Station Elimination Near Port San Antonio
Programmed Amount:	\$5,140,000
Core Business:	WW - Wastewater
Category:	Collection Facilities
Phase:	Construction
Council District:	District 04
Description and Scope:	
<p>The project eliminates the following lift stations by installation of new gravity sewer main. Lift Stations (LS) to be eliminated include LS 305, 307, 310, 320, 326, 329, and 333. Lift Station 105 is also included in this project and will be reconstructed.</p>	
Justification:	
<p>Reducing the number of lift stations in the SAWS sewer system will reduce the possibility of a sanitary sewer overflow.</p>	
Funding Information:	
Acquisition:	
Design:	\$718,120 (2019)
Construction:	\$5,000,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10105
Project: Lift Stations Rehabilitation - Phase 5
Programmed Amount: \$11,822,000
Core Business: WW - Wastewater
Category: Collection Facilities
Phase: Construction
Council District: District 04, District 05

Description and Scope:

Rehabilitate 15 existing lift stations that are located at Port San Antonio and Lackland AFB. The project includes safety and security upgrades, rehabilitation of wet wells, pump replacements, and electrical panel upgrades. All of the lift stations will be connected to a remote Supervisory Control and Data Acquisition System (SCADA) monitoring system. Wet well storage capacity has been verified for TCEQ regulatory compliance as well as the adequate response time in the event of an emergency. Some pumping, wet well, and force main capacities will be increased as needed. The Environmental Protection Agency (EPA) Sanitary Sewer Overflow (SSO) Consent Decree requires that these lift stations be rehabilitated by July 2023. Construction will start in 2021.

Justification:

These lift stations were installed between 20 and 50 years ago, and the typical life expectancy is 20 years. Rehabilitating the lift stations will reduce the probability of a sanitary sewer overflow.

Funding Information:

Acquisition:
Design: \$1,182,200 (2019)
Construction: \$11,500,000 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11350
Project: Classen Steubing New Bore Alignment
Programmed Amount: \$1,799,117
Core Business: WW - Wastewater
Category: Mains New - Sewer
Phase: Construction
Council District: District 09

Description and Scope:

The project consists of the installation of approximately one-third of a mile of 30-inch sewer pipe and the elimination of two lift stations, LS #150 and LS #191. This project includes a 720 foot bore under a San Antonio River Authority (SARA) dam and an extension of 150 feet along U.S. Highway 281 to connect the new 30-inch main crossing Mud Creek with the Classen-Steubing project.

Justification:

The project consisted of a bore under a dam, which was not completed by the Pro-10818 Classen-Steubing Oversized Sewer Main project due to complications with the boring equipment and the different types of soil. The 36-inch main was also not completely laid upstream of the manhole.

Funding Information:

Acquisition:
Design:
Construction: \$1,750,114 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10146
Project: Helotes Creek Gravity Main and Lift Station #246 Elimination
Programmed Amount: \$17,409,832
Core Business: WW - Wastewater
Category: Mains New - Sewer
Phase: Construction
Council District: OCL

Description and Scope:

The Helotes Creek Gravity Main and Lift Station #246 Elimination project consists of constructing approximately 2.5 miles of 15-inch to 27-inch gravity wastewater mains. The mains will be constructed in the West Basin from Lift Station #246 near Jericho Road, generally southward along State Highway 16 (Bandera Road) to the intersection of Bandera Road and Farm-to-Market Road (FM) 1560. This project will eliminate Lift Station #246 and allow wastewater flows to bypass Lift Station #233, a lift station at critical capacity.

Justification:

The Helotes Creek Gravity Main and Lift Station #246 Elimination project is needed to eliminate the potential for sanitary sewer overflows due to lift station failures. This master-planned project allows for future growth.

Funding Information:

Acquisition:
Design:
Construction: \$16,935,634 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-10902
Project:	Sewer Main Oversizing 2021 - SAWS
Programmed Amount:	\$4,112,000
Core Business:	WW - Wastewater
Category:	Mains New - Sewer
Phase:	Construction
Council District:	System Wide
Description and Scope:	
<p>Funds set aside for SAWS proportionate share of the cost of mains which are necessary to serve anticipated growth but are larger than the size main required by a developer customer or single customer. Developers are required to build necessary offsite infrastructure to meet the needs of their development. When growth is projected in adjacent tracts, SAWS contributes funds to increase the size of the mains to serve the additional growth. Sharing in the cost is beneficial to both SAWS and the developer and prevents the construction of parallel smaller sized mains.</p>	
Justification:	
<p>Participating in oversizing is a cost effective way to meet the needs of growth. It is funded by impact fees collected from new development.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$4,000,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-00235
Project: Governmental Sewer - 2021
Programmed Amount: \$27,756,000
Core Business: WW - Wastewater
Category: Governmental Sewer
Phase: Construction
Council District: System Wide

Description and Scope:

The governmental program consists of projects implemented in conjunction with other government agencies infrastructure work. The program includes replacement of sewer mains in poor condition, adjustment of sewer mains whose existing alignment conflicts with proposed new street alignment, and installation of new sewer mains needed to provide additional capacity. SAWS participates in the Utility Coordination Council, and jointly plans and reviews infrastructure improvements with COSA, Bexar County, CPS Energy, TXDOT, AT&T, and other agencies, to maximize effectiveness of public infrastructure.

Justification:

Replacing and/or adjusting aging infrastructure in conjunction with other agencies planned street work is the most cost effective approach to infrastructure management. It minimizes the cost of construction and minimizes the potential of utility failure under a new street.

Funding Information:

Acquisition:
Design:
Construction: \$27,000,000 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11248
Project:	2019 Small Capacity Constraints Package 1
Programmed Amount:	\$8,232,373
Core Business:	WW - Wastewater
Category:	Main Replacement - Sewer
Phase:	Construction
Council District:	District 01, District 02, District 03, District 05, District 07
Description and Scope:	
<p>This construction project consists of eight project sites at various locations. The projected improvements will alleviate the sanitary sewer overflows as mandated by the Environmental Protection Agency's Consent Decree agreement with SAWS. The project will replace approximately 2.7 miles of 8-inch to 18-inch sewer lines. The replacement of sewer lines will, in general, utilize the open cut excavation method.</p>	
Justification:	
<p>This project is needed to correct capacity deficiencies in the existing sanitary sewer infrastructure as required by the EPA Consent Decree and identified in the Capacity Remedial Measures Plan, approved March 25, 2020.</p>	
Funding Information:	
Acquisition:	
Design:	\$1,059,531(2019)
Construction:	\$8,008,145 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11249
Project:	2019 Small Capacity Constraints Package 2
Programmed Amount:	\$2,116,135
Core Business:	WW - Wastewater
Category:	Main Replacement - Sewer
Phase:	Construction
Council District:	District 01, District 05, District 08, District 09
Description and Scope:	
<p>This project will address four distinct capacity constraints on small diameter lines defined as lines less than 12-inches in diameter within the central sewershed. The project will replace almost one mile of 10-inch to 12-inch sewer pipe.</p>	
Justification:	
<p>This project is needed to correct capacity deficiencies in the existing sanitary sewer infrastructure as required by the EPA Consent Decree and identified in the Capacity Remedial Measures Plan, approved March 25, 2020.</p>	
Funding Information:	
Acquisition:	
Design:	\$238,180 (2019)
Construction:	\$2,058,497 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-00272
Project: C-18 McCullough Avenue Sewer Replacement
Programmed Amount: \$3,906,400
Core Business: WW - Wastewater
Category: Main Replacement - Sewer
Phase: Construction
Council District: District 01

Description and Scope:

This project was implemented to ease capacity issues in the Central Sewershed. It will start downstream at the newly completed Barbara Drive drainage project, and continue north along alley ways and onto Waring Drive at Oblate Drive. It will follow Waring Drive. until it turns west on to Springwood Lane. It will then run north on the east side of McCullough Avenue until it meets the upstream tie in at East Rampart. The project will upsize approximately 0.85 miles of sewer main by replacing existing 12" and 15" pipe with 21", 27", and 30" pipe.

Justification:

SAWS is obligated by the EPA Consent Decree to remediate field verified capacity constraints. This project is required by the capacity remedial measures plan approved by EPA.

Funding Information:**Acquisition:**

Design: \$44,490 (2020)
Construction: \$3,800,000 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-10695
Project:	C-69 South Zarzamora Street Sewer Upsize and Relief
Programmed Amount:	\$3,411,641
Core Business:	WW - Wastewater
Category:	Main Replacement - Sewer
Phase:	Construction
Council District:	District 04
Description and Scope:	
<p>Construction work on this project will replace and upsize approximately 0.75 miles of pipe with 8",18",24",30", and 36" pipe in the Central Sewershed. The sewer main replacement extends from the downstream tie-in at Six Mile creek approximately 0.15 miles east from the intersection of West Ansley Boulevard and Wilma Jean Drive. It then proceeds in a westerly direction within a drainage channel along West Ansley Boulevard. The alignment then follows the drainage channel between Beverly Ann Street and Betty Street to the upstream tie-in at South Zarzamora Street. There will also be approximately 0.6 miles of 27" sewer main abandonment and lateral replacements along Baetz Boulevard.</p>	
Justification:	
<p>SAWS is obligated by its consent decree to remediate field verified capacity constraints. This project is needed to correct capacity deficiencies in the existing sanitary sewer infrastructure as required by the EPA Consent Decree and identified in the Capacity Remedial Measures Plan, approved March 25, 2020.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$3,318,717 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11287
Project: Central Sewershed Package 10 (Terrell Hills)
Programmed Amount: \$1,556,392
Core Business: WW - Wastewater
Category: Main Replacement - Sewer
Phase: Construction
Council District: OCL

Description and Scope:

This purpose of this package is to rehabilitate sewer segments in poor condition that have been committed to the Condition Remedial Measures Plan. The rehabilitation method includes 0.65 miles of cured-in-place pipe.

Justification:

San Antonio Water System (SAWS) entered into a Consent Decree (CD) with the United States Environmental Protection Agency (EPA) on July 23, 2013. As part of the CD, SAWS is required to assess the condition of approximately 5,160 miles of gravity sewer main and identify condition remedial measures on pipes with very poor condition rating. This project has been identified as in need of repair due to condition and was prioritized as part of the EPA Consent Decree.

Funding Information:**Acquisition:**

Design: \$401,925 (2020)
Construction: \$1,514,000 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-00397
Project:	E-54: Cibolo Vista to Bulverde
Programmed Amount:	\$31,724,080
Core Business:	WW - Wastewater
Category:	Main Replacement - Sewer
Phase:	Construction
Council District:	District 10, OCL
Description and Scope:	
<p>This project will extend 2.9 miles of 30-inch gravity main from the E-4 project located east of Bulverde Road and north of 1604 to the north along Bulverde Road to the intersection of Bulverde and Evans Road. It will extend dual 30-inch force mains generally east along Evans Road for 0.8 miles to a regional 6.4 MGD lift station to be constructed as part of this project.</p> <p>Phase 1 of 2 is programmed in 2021. This phase will include the elimination of three existing lift stations: Fossil Ridge, Wortham Oaks and Fox Grove; however, it will facilitate the future elimination of Cibolo Canyon (CC) lift station. Phase 2, a separate project currently planned for 2025, will include the elimination of the CC lift station.</p>	
Justification:	
<p>This project will alleviate capacity constraints due to upstream growth. Phase 2 is planned for construction in 2025. This project is needed to correct capacity deficiencies in the existing sanitary sewer infrastructure as required by the EPA Consent Decree and identified in the Capacity Remedial Measures Plan, approved March 25, 2020.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$30,860,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10795
Project: E-74 Rosillo Creek Sewer Project
Programmed Amount: \$4,523,200
Core Business: WW - Wastewater
Category: Main Replacement - Sewer
Phase: Construction
Council District: OCL

Description and Scope:

Construction on this project will replace approximately one-half mile of an existing 24-inch gravity sanitary sewer main with a 60-inch in-line storage main and make provisions for a future odor control facility in the Eastern Sewershed. The future facility location will be just off of the IH-10 East Access Road., near the Rosillo Creek crossing. From the facility location the new alignment will tie into the existing main and follow Rosillo Creek south where it will reconnect to the existing main. A service road will be installed along the new pipeline for inspection and maintenance access.

Justification:

SAWS is obligated by its consent decree to remediate field verified capacity constraints. This project is needed to correct capacity deficiencies in the existing sanitary sewer infrastructure as required by the EPA Consent Decree and identified in the Capacity Remedial Measures Plan, approved March 25, 2020.

Funding Information:

Acquisition: \$2,263 (2018)
Design:
Construction: \$4,400,000 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11334
Project:	Inflow and Infiltration Reduction
Programmed Amount:	\$10,280,000
Core Business:	WW - Wastewater
Category:	Main Replacement - Sewer
Phase:	Construction
Council District:	System Wide
Description and Scope:	
This project will rehabilitate selected sewer mains, manholes, and sewer laterals in capacity constraint areas.	
Justification:	
This project is required under the EPA Consent Decree.	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$10,000,000 (2021)
Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-10916
Project:	Main Replacements - Sewer - SAWS Crews - 2021
Programmed Amount:	\$3,598,000
Core Business:	WW - Wastewater
Category:	Main Replacement - Sewer
Phase:	Construction
Council District:	System Wide
Description and Scope:	
<p>Replacement of sewer mains by SAWS crews. When failures in the sewer system are encountered, SAWS crews determine the best method to restore service. When portions of the system must be replaced, the project is evaluated to determine if SAWS crews or contractors will be the most effective or efficient means to complete the replacement.</p>	
Justification:	
<p>The replacement work is necessary to restore service and is required to comply with the EPA Consent Decree.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$3,500,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW	
Project ID:	Pro-10919
Project:	Sewer Laterals – 2021
Programmed Amount:	\$5,448,400
Core Business:	WW – Wastewater
Category:	Main Replacement – Sewer
Phase:	Construction
Council District:	System Wide
Description and Scope:	
<p>Replace deteriorated customer sewer upper laterals from the sewer main to the customer's property line. Each year SAWS crews replace customer laterals when televising or reported problems indicate the lateral has become unserviceable.</p>	
Justification:	
<p>Replacement of sewer laterals is necessary to restore service and reduces inflow and infiltration, which reduces sewer overflows, and is required by the EPA Consent Decree.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$5,300,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-00260
Project:	Small and Large Diameter Condition Remedial Measures 2021
Programmed Amount:	\$64,764,000
Core Business:	WW - Wastewater
Category:	Main Replacement - Sewer
Phase:	Construction
Council District:	System Wide
Description and Scope:	
<p>This project will fund the rehabilitation of approximately 25 miles of small and 6.5 miles of large diameter sewer mains that have been identified by televised inspection to be in very poor condition. Areas identified for rehabilitation are evaluated to determine the most cost effective method (conventional open trench replacement, cured in place pipe, or pipe bursting) of rehabilitation. This project is part of the EPA Consent Decree Condition Remedial Measures Plan, which requires SAWS to rehabilitate a total of 115 miles of sewer main in poor condition and also includes manhole rehabilitation that will be performed under this project.</p>	
Justification:	
Rehabilitation of the sewer system is required by the EPA Consent Decree.	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$63,000,000 (2021)
Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-00459
Project:	W-2 Huebner Creek - Eckhert to Bandera
Programmed Amount:	\$14,083,600
Core Business:	WW - Wastewater
Category:	Main Replacement - Sewer
Phase:	Construction
Council District:	District 06, District 07
Description and Scope:	
<p>The W-2 Huebner Creek: Eckhert to Bandera Project will replace approximately two miles of 6, 8, 10, 12, 21 and 24-inch sewer mains along Huebner Creek between Eckhert Road and Bandera Road with larger sized sewer mains up to 42-inch diameter. This project is part of the work required by San Antonio's agreement with the EPA to address capacity constrained sewer infrastructure across the city.</p>	
Justification:	
<p>This project is needed to correct capacity deficiencies in the existing sanitary sewer infrastructure as required by the EPA Consent Decree and identified in the Capacity Remedial Measures Plan, approved March 25, 2020.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$13,700,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10918
Project: Wastewater Main Replacement Work Order Engineering Contract - 2021
Programmed Amount: \$4,112,000
Core Business: WW - Wastewater
Category: Main Replacement - Sewer
Phase: Design
Council District: System Wide

Description and Scope:

This annual project will fund design services to repair/replace sewer mains that have experienced cave-ins and overflows. These projects vary in size and location and may require the solicitation of contractor construction services on an urgent basis. These projects will be constructed on an emergency basis to correct unsanitary and potentially hazardous conditions that pose a threat to public health and safety and are primarily projects required by the EPA Consent Decree.

Justification:

Design of replacement/repair mains is necessary to restore and maintain wastewater service.

Funding Information:**Acquisition:**

Design: \$4,000,000 (2021)

Construction:

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10657
Project: Leon Creek WRC Electrical System Improvements - Phase 2
Programmed Amount: \$411,200
Core Business: WW - Wastewater
Category: Treatment
Phase: Design
Council District: District 04

Description and Scope:

This project will design the replacement of the motor control centers, variable frequency drives and buildings at the dissolved air flotation and blowers area that are aging, in poor condition and/or do not meet Federal, State and Local electrical codes at the Leon Creek WRC. The electrical equipment to be replaced in this project was assessed and deemed to be at the end of its service life and in need of replacement by the Leon Creek WRC Electrical System Assessment Project. Phase 1 focused on the replacement of the main switchgear building and laid the foundation for Phase 2 work.

Phase 1 will be in construction in the fall of 2020. Additionally, with SAWS' decision to transition to a programmable logic controller (PLC) based system from the current distributed control system, the project will also replace the existing controller with a PLC to support this effort.

Justification:

The Leon Creek WRC has been in operation since 1965. The plant electrical equipment to be replaced on this project has been in operation since 2000 and is in moderate condition. Failure of this equipment could interrupt the treatment process, require emergency generators, and cause a fire or other safety issue.

Funding Information:**Acquisition:**

Design: \$400,000 (2021)
Construction: \$4,000,000 (2022)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET

PROJECT OVERVIEW

Project ID: Pro-00045
Project: Leon Creek WRC Improvements and Upgrades – Phase 2
Programmed Amount: \$21,691,977
Core Business: WW - Wastewater
Category: Treatment
Phase: Construction
Council District: District 04

Description and Scope:

This project is the final phase of upgrades or replacement of the critical infrastructure at the plant. The project will upgrade/replace the existing preliminary treatment facilities (headworks) that are ineffective and corroded, and install new and up-to-date electrical, instrumentation and control systems. It will replace the existing non-potable water system (NPW) including the existing NPW pumps and the NPW piping throughout the plant, providing for the high pressures required for the existing equipment to work properly, and connect the pumps to the plant's backup power system. It will also evaluate and restore or replace the site paving that is in poor condition due to age and wear and tear throughout the plant. A bottleneck in the junction box downstream of the final clarifiers will be removed so that the plant can treat its full peak flow capacity. The project will correct the hydraulic flaw in Final Clarifier No. 5. Finally, it will repair the concrete in the flow equalization basins and evaluate the aerators, and demolish all structures and equipment that are old, corroded, no longer needed and/or have become a potential safety threats (solids processing and storage building and tanks, stormwater clarifier, odor control system, etc.).

Justification:

This project is the last project of a series of projects at the plant over the last few years. The plant's full capacity will be able to be used and the plant will be almost completely upgraded after this project, requiring no large-scale project for the next 10 years or so. This is necessary to respond to the increase in flow as a result of the cleaning and upgrades from the SSO program.

Funding Information:

Acquisition:
Design: \$1,245,800 (2019)
Construction: \$21,101,145 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11362
Project:	Leon Creek WRC Strain Presses and Hydraulic Upgrades
Programmed Amount:	\$514,000
Core Business:	WW - Wastewater
Category:	Treatment
Phase:	Design
Council District:	District 04
Description and Scope:	
<p>Design project for new strain presses that will be installed to clean sludge coming from the Leon Creek WRC before the flows are transferred to Steven M. Clouse WRC. Any hydraulic bottlenecks will be evaluated, and necessary improvements will be made to be able to pass 92 million gallons per day of peak flows.</p>	
Justification:	
<p>Strain presses are necessary to clean the sludge before diverting it to Steven M. Clouse WRC and to maintain the sludge interconnect pipeline free of clogging. The hydraulic improvements are necessary to bring the plant to its full peak flow capacity of 92 million gallons per day (mgd).</p>	
Funding Information:	
Acquisition:	
Design:	\$500,000 (2021)
Construction:	\$5,000,000 (2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-00287
Project:	Steven M. Clouse WRC Blower System Improvements
Programmed Amount:	\$2,313,000
Core Business:	WW - Wastewater
Category:	Treatment
Phase:	Design
Council District:	District 03
Description and Scope:	
<p>The project will design the installation of new blowers that meet the TCEQ biological treatment requirements that are easy to integrate into the existing aeration system and piping, and that are more energy efficient. The blowers are essential components of the biological treatment process. The existing blowers at the Steven M. Clouse WRC are more than 30 years old, and at the end of their useful life. The electrical systems connected to the blowers and the blower building will also be upgraded.</p>	
Justification:	
<p>Blowers are needed in order to supply air to the aeration basins for biological treatment in an uninterrupted manner. This is essential to being able to meet permit requirements. The existing blowers are more than 30 years old, and have become more susceptible to service interruptions due to frequent maintenance requirements. The blower system improvements at Leon Creek resulted in 30% energy savings, and the improvements at SMC WRC will be evaluated during the preliminary engineering review.</p>	
Funding Information:	
Acquisition:	
Design:	\$2,250,000 (2021)
Construction:	\$15,000,000 (2023)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11045
Project: Steven M. Clouse WRC Digester Mixing and System Enhancements – Phase 3
Programmed Amount: \$18,504,000
Core Business: WW - Wastewater
Category: Treatment
Phase: Construction
Council District: District 03

Description and Scope:

Construction includes the improvements to four existing digesters (No. 5, 6, 7 and 8) at the digester complex including cleaning of digesters, repair of the dome liners, repair and/or replacement of dome hatches and manways, dome pressure and vacuum relief assemblies and valves, replacement of existing digester mixing systems, and enhancements of existing digester gas meters. The digester hot water pumping and heat exchanger systems will be rehabilitated or replaced. The digesters are currently under-heated to about 95°F. This is causing low volatile solids destruction efficiencies in the digesters. An increase in heat exchange capacity is needed to heat the digesters to about 98°F to increase the efficiency. The oldest third boiler will be replaced to provide the hot water for the heat exchangers. The digester pumping and heat exchanger systems will be rehabilitated or replaced, as necessary. Electrical and instrumentation and control improvements will also be completed.

Justification:

These improvements will increase operational reliability and efficiency of the sludge digestion process.

Funding Information:**Acquisition:**

Design: \$1,542,000 (2020)

Construction: \$18,000,000 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET

PROJECT OVERVIEW

Project ID: Pro-00120
Project: Steven M. Clouse WRC Electrical System Improvements - Phase 2
Programmed Amount: \$4,112,000
Core Business: WW - Wastewater
Category: Treatment
Phase: Construction
Council District: District 03

Description and Scope:

This project is the second of four phases and will replace various plant electrical switchgear, motor control centers, transformers and generators that are aging, in poor condition and/or do not meet Federal, State and Local electrical codes. All plant electrical equipment was assessed and evaluated, and the electrical equipment to be replaced in Phase 2 was deemed to be in poor condition.

Phase 1 has been completed and focused on the high voltage equipment and installed a new main switchgear building that laid the foundation for tie in of all future phased improvements. Phase 2 will award for construction in early 2021 at an estimated cost of \$28.1 million (funded from 2019, 2020 and 2021 CIP years based on expanded project scope). Included in the construction is the work associated with transitioning the existing distributed control system into a programmable logic controller based system to align with the other core service areas in SAWS system.

Phase 3 will be constructed in 2023 at an estimated cost of \$15 million and Phase 4 is planned for 2025 at \$10.5 million.

Justification:

The Dos Rios WRC has been in operation since 1987, and the plant electrical equipment is in poor condition. Failure of this equipment could interrupt the treatment process, require emergency generators, and cause a fire or other safety issue. Additional funds are needed in 2021 to allow for the change in scope associated with the Control System Upgrade project.

Funding Information:**Acquisition:**

Design: \$1,900,057 (2017)

Construction: \$4,000,000 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11049
Project:	Steven M. Clouse WRC Headworks Enhancements Phase 2 (Grit Removal)
Programmed Amount:	\$5,140,000
Core Business:	WW - Wastewater
Category:	Treatment
Phase:	Construction
Council District:	District 03
Description and Scope:	
<p>The existing grit removal system is ineffective in removing grit from the raw wastewater. An in-depth investigation of the grit chambers, grit pumps and grit washer/classifier units will be performed to determine the cause and, depending on the outcome of this investigation, a remedial design will be implemented.</p>	
Justification:	
<p>Proper operation of the grit removal system is vital in order to prevent premature wear and tear in the downstream equipment and grit deposition in the digesters. Grit deposition in digesters means reduced digestion capacity and frequent digester cleaning, which in turn results in increase in annual maintenance cost.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$5,000,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-10920
Project:	Treatment Facilities Engineering Work Order Contract 2021
Programmed Amount:	\$514,000
Core Business:	WW - Wastewater
Category:	Treatment
Phase:	Design
Council District:	System Wide
Description and Scope:	
<p>Work order contracts for engineering of small but urgent projects that are not executable by SAWS engineering and operations staff. These contracts allow flexibility to execute projects without pulling funds from budgeted projects, and avoid delays associated with conventional bid processes.</p>	
Justification:	
<p>This Work Order Contract will be on an "as-needed" basis, and the scope of the construction will depend on the nature of each individual project. A work order will be issued upon identification of a need for a construction activity and determination of its scope and schedule.</p>	
Funding Information:	
Acquisition:	
Design:	\$500,000 (2021)
Construction:	
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11250
Project: Water Recycling Center Control System Upgrades
Programmed Amount: \$5,140,000
Core Business: WW - Wastewater
Category: Treatment
Phase: Construction
Council District: District 03, District 04

Description and Scope:

SAWS Water Recycling Center (WRC) Control System Upgrades will upgrade the Emerson SCADA control systems at SAWS three wastewater recycling centers. This upgrade will deploy an all new Human Machine Interface (HMI) and controllers improving the monitoring and controlling capabilities of WRC equipment and provide more advanced cybersecurity defenses for these critical systems. The upgrade will enable better analytics and automation to improve operational capabilities, along with better coordination between all three WRC control systems.

The plan is to do the design and construction as follows:

- 2020: \$4.0M - Design for Clouse, Medio and Leon WRCs and Phase 1 Construction for Clouse WRC
- 2021: \$5.0M - Phase 2 Construction for Clouse WRC
- 2023: \$4.0M - Construction for Medio and Leon WRCs

Justification:

The SCADA systems are outdated and need to be updated. The Emerson technology is end of life and we do often experience costly failures at the plants that cause outages and operational issues.

Funding Information:**Acquisition:****Design:**

Construction: \$5,000,000 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

WATER SUPPLY

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**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW	
Project ID:	Pro-00301
Project:	Artesia - Pump Station Rehabilitation Phase 5
Programmed Amount:	\$16,185,860
Core Business:	WS - Water Supply
Category:	ASR
Phase:	Construction
Council District:	District 02
Description and Scope:	
<p>The Artesia pump station serves PZ 828 (formerly PZ 3) across the southern half of the area inside Loop 410. This pump station has a capacity of producing over 50 million gallons per day of water, and also supplies water to the Aquifer Storage and Recovery site. The scope of this project is to evaluate and replace mechanical and electrical components of the pump station including pumps and motors.</p>	
Justification:	
<p>Artesia Pump Station was built in 1960. The electrical, mechanical, heating, ventilation and air conditioning (HVAC), and the instrumentation and controls of Artesia pump station are aging and becoming difficult to maintain. These aging components could cause safety issues.</p>	
Funding Information:	
Acquisition:	
Design:	\$1,336,400 (2018)
Construction:	\$15,745,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-00003
Project: Artesia Wells Phase 1
Programmed Amount: \$9,252,000
Core Business: WS - Water Supply
Category: ASR
Phase: Construction
Council District: District 02

Description and Scope:

Drill new wells to restore production capacity at Artesia Pump Station. The original 6 wells were drilled in the 1950s. Three of the six original wells have completely failed due to holes in the casing. Two of the remaining wells have been rehabilitated, but the rehabilitation process caused a significant loss in production capacity.

Justification:

The Artesia Pump Station is a significant pump station serving the area around the AT&T Center, and providing water to be stored in the Aquifer Storage and Recovery site. If these wells fail, SAWS will not be able to bank as much water at the ASR and this would be detrimental during a drought of record.

This project is required in order to ensure the Artesia PS can continue to operate as intended. This pump station used to have six wells, however three of those wells were plugged due to concerns with the steel casings. The remaining three wells are in bad shape as well, they have been repaired numerous times and it's just a matter of time before they fail as well. Losing those wells will mean the pump station won't be able to operate, which in turn will limit the amount of water SAWS can send to the H2Oaks Facility and more importantly, it will cripple SAWS ability to feed pressure zone 828 and all of the southeast area of San Antonio.

Funding Information:**Acquisition:****Design:**

Construction: \$9,000,000 (2021)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW	
Project ID:	Pro-10899
Project:	General Legal Services - WS - 2021
Programmed Amount:	\$12,850
Core Business:	WS - Water Supply
Category:	Corporate WS
Phase:	Acquisition
Council District:	System Wide
Description and Scope:	
Specialized legal support is required for critical projects.	
Justification:	
External legal support is sought only when there is insufficient internal legal staff to support the effort, or specialized legal expertise is required.	
Funding Information:	
Acquisition:	\$12,500 (2021)
Design:	
Construction:	
Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11507
Project:	Water Supply Overhead 2021
Programmed Amount:	\$3,000,000
Core Business:	WS - Water Supply
Category:	Corporate WS
Phase:	Construction
Council District:	System Wide
Description and Scope:	
<p>SAWS overhead costs cover the direct costs associated with SAWS personnel that manage and support CIP projects during the capitalizable phases of the project. The overhead costs were calculated primarily using the capitalized costs from staff time charged using the CIP Time Tracker on an annualized basis and analyzing the remaining 2020 and prior year CIP projects and the future 2021 CIP projects.</p>	
Justification:	
<p>Overhead costs are applied to SAWS personnel costs in order to capture direct incremental costs associated with SAWS personnel that support the development and construction of CIP projects.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$3,000,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11511
Project:	Water Supply OCCC 2021
Programmed Amount:	\$2,313,750
Core Business:	WS - Water Supply
Category:	Corporate WS
Phase:	Construction
Council District:	System Wide
Description and Scope:	
<p>Funds for Owner Controlled Construction Changes (OCCC) that may be requested by SAWS to offset unforeseen CIP Project cost changes that may occur during the course of project execution in 2021. Funding amounts are determined by reviewing historical data and project schedules to determine the estimated amount needed for present and future years.</p>	
Justification:	
<p>Improve the monitoring and efficiency of construction changes. OCCC changes in excess of the amount required by Texas Local Government Code will continue to require Board approval in accordance with SAWS resolutions.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$2,250,730 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET

PROJECT OVERVIEW

Project ID: Pro-00320
Project: Brooks Recycled Water Pump Station Upgrade
Programmed Amount: \$462,600
Core Business: RW - Recycled Water
Category: Recycled Water
Phase: Design
Council District: District 03

Description and Scope:

Provide an in-depth investigation of the station hydraulics, storage, valves, electrical equipment and components, including the existing 12-inch supply feed from the Clouse Water Recycling Center (WRC), and the Supervisory Control and Data Acquisition (SCADA) equipment and operation. Based on the investigation a design will be implemented to address the necessary requirements for the Brooks Recycled Water Pump Station to function efficiently and provide operational flexibility in serving recycle customers throughout the pump station's distribution network, including Riverside Golf Course. The Riverside Golf Course pump station is not running efficiently and the upgrades to Brooks' hydraulic system should help the Riverside hydraulic System. The hydraulic analysis at Brooks can help alleviate the strain on the Riverside Golf Course's hydraulic system, and allow Riverside's pumps to run more efficiently, thus saving energy and reducing maintenance.

Justification:

The 20 year old Pump Station does not meet the demands of its existing and future customer base. The current station struggles to provide adequate flows and pressure to its customers, while continuously running at inefficient rates. Proper upgrades are vital to prevent premature wear, tear, and high maintenance costs. SAWS risks having a failure at this site, if no action is taken. This failure would put a significant number of customers out of service.

Funding Information:

Acquisition:
Design: \$450,000 (2021)
Construction: \$4,250,000 (2022)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11454
Project:	Governmental Adjustments - Recycled Water - 2021
Programmed Amount:	\$205,600
Core Business:	RW - Recycled Water
Category:	Recycled Water
Phase:	Construction
Council District:	System Wide
Description and Scope:	
<p>The governmental recycled water program consists of projects implemented in conjunction with other government entities, when they implement maintenance and/or capital improvement projects. Through this program, SAWS participates in the relocation and replacement of recycled water facilities, when appropriate or required. SAWS participates in the Utility Coordination Council, and jointly plans and reviews infrastructure improvements with the City of San Antonio (COSA), Bexar County, City Public Service (CPS) Energy, Texas Department of Transportation (TXDOT), AT&T, and other agencies, to maximize effectiveness of public infrastructure.</p>	
Justification:	
<p>Replacing aging infrastructure in conjunction with other agencies planned street work is the most cost-effective approach to infrastructure management. It minimizes the cost of construction and minimizes the potential of utility failure under a new street.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$200,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11451
Project: Leon to Clouse Recycled Water Interconnect Project
Programmed Amount: \$1,028,000
Core Business: RW - Recycled Water
Category: Recycled Water
Phase: Design
Council District: District 03

Description and Scope:

The project will design an improvement that will loop the recycled water system and connect the recycled water mains from Leon Creek Water Recycling Center (LC WRC) to the Steven M. Clouse Water Recycling Center (SMC WRC). The project is divided into two phases. The first phase extends from LC WRC to a location near the southeastern corner of Mitchell Lake. The second phase extends from Mitchell Lake to SMC WRC.

Phase 1 of the project will convey recycled water to Mitchell Lake, the projected constructed wetlands south of Mitchell Lake, the Navistar facility, and Mission del Lago Golf Course. Phase 2 will be designed and constructed at a future date to be determined.

Justification:

Connecting the recycled water systems from LC WRC and SMC WRC provides for added reliability and redundancy to recycled water customers. The project also provides flexibility to recycled water system operations and enables expansion and provision of service to potential customers into the future.

Funding Information:**Acquisition:**

Design: \$1,000,000 (2021)

Construction: \$10,000,000 (2022)

Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-10922
Project:	Recycled Water Customer Lines - 2021
Programmed Amount:	\$205,600
Core Business:	RW - Recycled Water
Category:	Recycled Water
Phase:	Construction
Council District:	System Wide
Description and Scope: Provide recycled water to customers for irrigation, cooling towers, and industrial uses.	
Justification: Providing recycled water avoids the use of potable water sources.	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$200,000 (2021)
Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.	

**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11509
Project:	Recycled Water Overhead 2021
Programmed Amount:	\$225,000
Core Business:	RW - Recycled Water
Category:	Recycled Water
Phase:	Construction
Council District:	System Wide
Description and Scope:	
<p>SAWS overhead costs cover the direct costs associated with SAWS personnel that manage and support CIP projects during the capitalizable phases of the project. The overhead costs were calculated primarily using the capitalized costs from staff time charged using the CIP Time Tracker on an annualized basis and analyzing the remaining 2020 and prior year CIP projects and the future 2021 CIP projects.</p>	
Justification:	
<p>Overhead costs are applied to SAWS personnel costs in order to capture direct incremental costs associated with SAWS personnel that support the development and construction of CIP projects.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$225,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

CHILLED WATER

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**SAN ANTONIO WATER SYSTEM
2021 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11508
Project:	Chilled Water Overhead 2021
Programmed Amount:	\$125,000
Core Business:	CW - Chilled Water
Category:	Chilled Water
Phase:	Construction
Council District:	System Wide
Description and Scope:	
<p>SAWS overhead costs cover the direct costs associated with SAWS personnel that manage and support CIP projects during the capitalizable phases of the project. The overhead costs were calculated primarily using the capitalized costs from staff time charged using the CIP Time Tracker on an annualized basis and analyzing the remaining 2020 and prior year CIP projects and the future 2021 CIP projects.</p>	
Justification:	
<p>Overhead costs are applied to SAWS personnel costs in order to capture direct incremental costs associated with SAWS personnel that support the development and construction of CIP projects.</p>	
Funding Information:	
Acquisition:	
Design:	
Construction:	\$125,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

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SUPPLEMENTAL INFORMATION

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WATER SUPPLY FEE

Effective for all potable water consumption on or about January 1, 2020. No changes to these rates have been adopted for implementation in 2021.

This fee directly funds the acquisition of new water supplies to reduce San Antonio's dependence on the Edwards Aquifer.

The Water Supply Fee shall be assessed on all potable water service for water usage in every instance of service for each month or fraction thereof according to the schedule below:

WATER SUPPLY FEE		
RATE CLASS	USAGE GALLON - BLOCK THRESHOLD	ASSESSED FEE RATE PER 100 GALLONS
		Approved 2020
Residential	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
General	Base*	\$0.2989
	125% of Base	0.3438
	175% of Base	0.4482
	Over 175% of Base	0.5232
Wholesale	Base**	\$0.3892
	Over Base	1.1681
Irrigation	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% of the prior year's average monthly consumption.

**The Base Use for the Wholesale Class is defined as 100% of the prior year's average monthly consumption or as agreed to by the wholesale customer and approved by the SAWS Board of Trustees.

RESIDENTIAL WATER AND SEWER RATES

RESIDENTIAL WATER RATES

Effective for all potable water consumption on or about January 1, 2020. No changes to these rates have been adopted for implementation in 2021.

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

MONTHLY SERVICE AVAILABILITY CHARGE

METER SIZE	INSIDE CITY LIMITS	OUTSIDE CITY LIMITS
	Approved	Approved
	2020	2020
5/8"	\$12.82	\$16.67
3/4"	16.97	22.06
1"	25.22	32.79
1 1/2"	45.85	59.61
2"	70.58	91.75
3"	128.34	166.84
4"	210.83	274.06
6"	417.07	542.18
8"	664.55	863.89
10"	953.27	1,239.24
12"	1,778.20	2,311.67

Lifeline Discount

	INSIDE CITY LIMITS	OUTSIDE CITY LIMITS
	Approved	Approved
	2020	2020
Discount *	\$2.57	\$3.34

MONTHLY VOLUME CHARGE

Usage Gallon Block Threshold	INSIDE CITY LIMITS	OUTSIDE CITY LIMITS
	RATE PER 100 GALLONS	RATE PER 100 GALLONS
	Approved	Approved
	2020	2020
2,992	\$0.0740	\$0.0962
4,489	0.1295	0.1683
5,985	0.1665	0.2165
7,481	0.2034	0.2645
10,473	0.2405	0.3125
14,962	0.2775	0.3607
20,199	0.3329	0.4328
Over 20,199	0.4809	0.6253

*Water Service Availability Charge is reduced by the discount if monthly usage does not exceed 2,992 gallons.

RESIDENTIAL SEWER RATES

Effective for all potable water consumption on or about January 1, 2020. No changes to these rates have been adopted for implementation in 2021.

Sewer service charges for all metered residential connections 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 SEWER SERVICE AVAILABILITY CHARGE

METER SIZE	INSIDE CITY LIMITS	OUTSIDE CITY LIMITS
	Approved	Approved
	2020	2020
5/8"	\$14.53	\$17.43
3/4"	15.97	19.18
1"	18.14	21.78
1 1/2"	25.41	30.50
2"	36.31	43.58
3"	72.61	87.12
4"	108.91	130.70
6"	181.52	217.83
8"	290.41	348.52
10"	435.65	522.77
12"	580.86	697.03

MONTHLY SEWER VOLUME CHARGE

Usage Gallon Block Threshold	INSIDE CITY LIMITS	OUTSIDE CITY LIMITS
	RATE PER 100 GALLONS	RATE PER 100 GALLONS
	Approved	Approved
	2020	2020
1,496	\$0.0000	\$0.0000
2,992	0.3104	0.3726
Over 2,992	0.4657	0.5588

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 with no San Antonio Water System water meter will be charged the Sewer Service Availability Charge based on a 5/8" meter size.

AFFORDABILITY DISCOUNT

Effective for consumption on or about January 1, 2020.

SAWS offers four levels of affordability discounts for residential customers who meet the income eligibility requirements.

Qualifying customers can receive the discount by completing an Uplift Program application. Program qualifications include being a SAWS customer and meeting the federal income assistance guidelines. Eligibility is based on household family size and Income at or below 125% of federal income guidelines

AFFORDABILITY PROGRAM DISCOUNTS

Family Size	Annual income at or below
1	\$15,950
2	21,550
3	27,150
4	32,750
5	38,350
6	43,950
7	49,550
8	55,150
Families with more than 8 persons	Add \$4,480 for each additional person

DISCOUNT BASED ON TYPE OF SERVICE PROVIDED

	Annual income at or below 50% Poverty	Annual income at or below 75% Poverty	Annual income at or below 100% Poverty	Annual income at or below 125% Poverty
Water and Sewer	\$28.35	\$19.40	\$12.50	\$9.80
Water only	13.85	9.60	6.25	4.90
Sewer only	14.50	9.80	6.25	4.90

GENERAL CLASS WATER SERVICE AND SEWER RATES

Including Apartment, Commercial, Industrial and Municipal

Effective for consumption on or about January 1, 2020. No changes to these rates have been adopted for implementation in 2021.

For business customers, a multi-step, base-excess use structure has been developed called the General Class. The base amount for General Class customers is 100% of customer's prior year's average monthly usage. Increased unit rates apply as usage exceeds each customer's base amount.

GENERAL CLASS WATER RATES

Monthly Service Availability and Volume Charge

The Monthly Service Availability Charge (minimum bill) for all general 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 FEE

METER SIZE	INSIDE CITY LIMITS	OUTSIDE CITY LIMITS
	Approved	Approved
	2020	2020
5/8"	\$13.86	\$16.94
3/4"	19.79	24.12
1"	31.66	38.45
1 1/2"	61.29	74.27
2"	96.79	117.20
3"	179.74	217.47
4"	298.19	360.65
6"	594.32	718.67
8"	949.73	1,148.31
10"	1,364.34	1,649.54
12"	2,548.96	3,081.65

MONTHLY VOLUME CHARGE

USAGE BLOCKS	INSIDE CITY LIMITS	OUTSIDE CITY LIMITS
	RATE PER 100 GALLONS	RATE PER 100 GALLONS
	Approved	Approved
	2020	2020
Base	\$0.1810	\$0.2354
>100-125% of Base	0.2084	0.2710
>125-175% of Base	0.2717	0.3533
>175% of Base	0.3171	0.4121

The Base Use is defined as 100% of the prior year's average monthly consumption.

GENERAL CLASS SEWER RATES

MONTHLY SERVICE AVAILABILITY FEE

METER SIZE	INSIDE CITY LIMITS	OUTSIDE CITY LIMITS
	Approved	Approved
	2020	2020
5/8"	\$14.53	\$17.43
3/4"	15.97	19.18
1"	18.14	21.78
1 1/2"	25.41	30.50
2"	36.31	43.58
3"	72.61	87.12
4"	108.91	130.70
6"	181.52	217.83
8"	290.41	348.52
10"	435.65	522.77
12"	580.86	697.03

Customers who do not have a San Antonio Water System water meter will be charged the Sewer Service Availability Charge based on a 2" meter size.

MONTHLY SEWER VOLUME CHARGE

Usage Blocks Base*	INSIDE CITY LIMITS	OUTSIDE CITY LIMITS
	RATE PER 100 GALLONS	RATE PER 100 GALLONS
	Approved	Approved
	2020	2020
1,496	\$0.0000	\$0.0000
Over 1,496	0.4159	0.4992

The Base Use is defined as 100% of the prior year's average monthly consumption.

LANDSCAPE IRRIGATION SERVICE RATES

Effective for consumption on or about January 1, 2020. No changes to these rates have been adopted for implementation in 2021.

The landscape irrigation rate applies to all "landscape irrigation" accounts. These exclude irrigation meters using water as part of their business function (e.g. process water and nurseries) as well as when used for health and safety purposes (e.g. school athletic fields). New commercial businesses are required to install separate landscape irrigation meters. Existing accounts will be retrofitted where possible. Accounts not retrofitted will be prorated based on estimated irrigation water use.

Monthly Service Availability and Volume Charge

The Monthly Service Availability Charge (minimum bill) for all irrigation 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 FEE

METER SIZE	INSIDE CITY LIMITS	OUTSIDE CITY LIMITS
	Approved	Approved
	2020	2020
5/8"	\$13.86	\$16.94
3/4"	19.79	24.12
1"	31.66	38.45
1 1/2"	61.29	74.27
2"	96.79	117.20
3"	179.74	217.47
4"	298.19	360.65
6"	594.32	718.67
8"	949.73	1,148.31
10"	1,364.34	1,649.54
12"	2,548.96	3,081.65

MONTHLY VOLUME CHARGE

Usage Gallon Block Threshold	INSIDE CITY LIMITS	OUTSIDE CITY LIMITS
	RATE PER 100 GALLONS	RATE PER 100 GALLONS
	Approved	Approved
	2020	2020
8,229	\$ 0.3292	\$ 0.4279
17,954	0.4607	0.5991
162,316	0.5925	0.7702
Over 162,316	0.7570	0.9841

WHOLESALE WATER SERVICE AND SEWER RATES

Effective for consumption on or about January 1, 2020. No changes to these rates have been adopted for implementation in 2021.

WHOLESALE WATER RATES

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 FEE

METER SIZE	Approved 2020
6"	\$538.85
8"	860.58
10"	1,235.91
12"	2,308.35

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."

MONTHLY VOLUME CHARGE

USAGE BLOCKS	RATE PER 100 GALLONS
	Approved 2020
Base*	\$0.2099
Over Base	0.6299

*The Base Use 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.

WHOLESALE SEWER RATES

Sewer service charges for all metered wholesale water connections shall be the sum of the appropriate Sewer Service Availability Charge and the application of the Sewer Monthly Volume Charges to metered water usage and are billed according to the schedule below.

MONTHLY SEWER RATE

	Approved 2020
Sewer Service Availability Charge	\$340.07
Monthly Volume All Usage / per 100 gallons	\$0.4438

EDWARDS AQUIFER AUTHORITY PERMIT FEE

Ordinance No. 87042 provides for the establishment and assessment of a pass-through charge of the Edwards Aquifer Authority Permit Fee to all San Antonio Water System water customers. Fee is assessed on all potable water usage. Any changes to the pass-through fee for 2021 will be evaluated at the end of 2020.

Year	EAA Fee (per 100 gallons)
2005	0.01549
2006	0.01482
2007	0.01352
2008	0.01769
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
2019	0.03561
2020	0.03452

* Increased April 1, 2012 to include funding for EAA Habitat Conservation Plan Program.

TCEQ FEE

San Antonio Water System works cooperatively with government agencies to comply with local, state and federal regulations. As the state-level environmental agency, the Texas Commission on Environmental Quality (TCEQ) generates part of its operating revenue from fees charged to utilities like SAWS.

To help recover the fees assessed by TCEQ, SAWS charges every customer a TCEQ pass-through fee.

The pass-through fee applies to all residential, commercial and wholesale accounts. Any changes to the pass-through fees for 2021 will be evaluated at the end of 2020.

2020 TCEQ PASS-THROUGH FEE	
Service Type	Monthly Rate
Water Fee	\$0.21
Wastewater Fee	\$0.06

RECYCLED WATER SERVICE

Effective for all potable water consumption on or about January 1, 2020.

Monthly Service Availability and Volume Charge

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 of fraction thereof shall be as follows:

EDWARDS EXCHANGE CUSTOMERS

MONTHLY SERVICE AVAILABILITY FEE

METER SIZE	Approved 2020
5/8"	\$14.71
3/4"	19.13
1"	24.94
1 1/2"	39.62
2"	57.93
3"	154.09
4"	229.04
6"	436.90
8"	658.58
10"	903.06
12"	1,114.22

MONTHLY VOLUME CHARGE

	Standard	Seasonal
Usage in Gallons	RATE PER 100 GALLONS	RATE PER 100 GALLONS
	Approved 2020	Approved 2020
Transferred Amount	\$0.0387	\$0.0387
All in excess of transferred amount	0.1452	0.1542

The Volume Charge "Seasonal" Rate per 100 Gallons shall be applied to all billings beginning on or about May 1 and ending after five complete billing months on or about September 30 of each year. At all other times the Volume Charge "Standard" Rate per 100 Gallons shall be utilized.

NON-EDWARDS EXCHANGE CUSTOMERS

MONTHLY SERVICE AVAILABILITY FEE

METER SIZE	Approved 2020
5/8"	\$14.71
4"	19.13
1"	24.94
1 1/2"	39.62
2"	57.93
3"	154.09
4"	229.04
6"	436.90
8"	658.58
10"	903.06
12"	1,114.22

MONTHLY VOLUME CHARGE

Usage in Gallons	Standard	Seasonal
	RATE PER 100 GALLONS	RATE PER 100 GALLONS
	Approved 2020	Approved 2020
First 748,000	\$0.1553	\$0.1670
Over 748,000	0.1588	0.1684

The Volume Charge "Seasonal" Rate per 100 Gallons shall be applied to all billings beginning on or about May 1 and ending after five complete billing months on or about September 30 of each year. At all other times the Volume Charge "Standard" Rate per 100 Gallons shall be utilized.

GLOSSARY

Acre-Foot	The volume of water that would cover one acre to a depth of one foot. It is equal to 325,851 gallons
Affordability Discount	Customer assistance program designed to provide a discount to customers who meet income eligibility requirements.
Annual Budget	A financial plan for a specified period of time (fiscal year) that assigns resources to each activity in sufficient amounts so as to reasonably expect accomplishment of the objectives in the most cost-effective manner.
Aquifer	A wet underground layer of water-bearing permeable rock or unconsolidated materials (gravel, sand, or silt) from which groundwater can be usefully extracted using a water well.
Balanced Budget	A budget in which planned revenues generated from various user fees and receipts are sufficient to fund planned expenditures.
Board	Board of Trustees of the San Antonio Water System
Bonds	City of San Antonio, Texas Water System Revenue and Refunding Bonds
Brackish Groundwater	Either slightly or moderately saline water containing between 1,000 and 10,000 milligrams per liter (mg/L) of total dissolved solids (TDS).
Build America Bonds	Taxable municipal bonds that carry special tax credits and federal subsidies for either the bond issuer or the bondholder. Build America Bonds were created under the American Recovery and Reinvestment Act on February 17, 2009.
Capital Improvement Program	The Capital Improvement Program (CIP) is a planning and budgeting tool that provides information about SAWS' infrastructure needs. It identifies facility and equipment requirements for sustaining, restoring and modernizing the facilities and infrastructure that support water supply and delivery, wastewater collection and treatment, and heating and cooling requirements in the SAWS service area. It also prioritizes and schedules them for funding and implementation through a multi-year plan.
Capital Expenditure	An expenditure that: <ul style="list-style-type: none"> • results in additions or improvements of a permanent nature • is in an amount exceeding \$5,000 • adds value and has a useful life of more than one year • prolongs the life of the improved or enhanced property • is necessary to establish or implement the use of a capital asset such that the modification of other existing assets makes the new asset operational.
City	The City of San Antonio (COSA), located in the State of Texas.

City Council	The current elected officials of the City of San Antonio, as set forth in the City's Charter. Unless otherwise stated, the Mayor is considered part of the City Council.
Commercial Paper	An unsecured, short-term debt instrument maturing between 1 and 270 days, that provides the debt holders (bondholders) exemption from at least some taxes on the earnings at a local, state or federal level, or a combination thereof. The debt is usually issued at a discount, reflecting prevailing market interest rates. Tax-Exempt commercial paper is typically backed only by the issuer's promise to pay the face amount on the maturity date specified on the note.
Consent Decree	A legal agreement between SAWS and the U.S. Environmental Protection Agency (EPA) whereby SAWS agreed to make significant upgrades to reduce overflows from its sewer system and pay a civil penalty to resolve Clean Water Act (CWA) violations stemming from illegal discharges of raw sewage.
COVID-19 Pandemic	Coronavirus 2019 Pandemic
CPS Energy	Municipally owned utility providing electric and gas to the San Antonio and Bexar County area - formerly City Public Service (CPS).
CPS Contract Or CPS Energy Contract	The Wastewater Contract executed on September 15, 1990 between the Alamo Conservation and Reuse District and the City Public Service Board of San Antonio.
Desalination	Brackish groundwater desalination
Debt	All indebtedness payable from Pledged Revenues and/or Net Revenues incurred or assumed by the City for borrowed money and all other SAWS financing obligations 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.
Debt Service Requirements	As of any particular date of computation, with respect to any obligation and 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.
District Special Project (DSP)	Former Bexar Metropolitan Water District
Encumbrance	Amount for which there is a legal obligation to spend in the future. A purchase order is a typical encumbrance transaction
Edwards Aquifer HCP	Edwards Aquifer Habitat Conservation Program

Fiscal Year	The twelve- month accounting period used by SAWS 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 period of three calendar years.
Gross Revenues	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, any impact fees charged by the System, 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.
Incidental Take Permit	A permit issued by the U.S. Fish and Wildlife Service which allows the permit-holder to legally proceed with an activity that would otherwise result in the unlawful take of a listed wildlife species.
J-17 Index Well	This well is situated on a major Edwards Aquifer recharge flow path and responds quickly to pumpage and recharge. The well has been used for many decades to record changes in the level of the aquifer in the San Antonio area
Junior Lien Obligations	Bonds, Previously Issued Junior Lien Obligations, and any Additional 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 SAWS' Net Revenues
Lift Station	Lift stations are facilities designed to move wastewater from lower to higher elevation, particularly where the elevation of the source is not sufficient for gravity flow and/or when the use of gravity conveyance will result in excessive excavation depths and high sewer construction costs.
Net Revenues	Gross Revenues of the System, with respect to any period, after deducting the System's Operating and Maintenance Expenses during such period.
Operations and Maintenance Expense	<p>All current expenses of operating and maintaining the System not paid from the proceeds of any Debt, including:</p> <p>(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, 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,</p> <p>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,</p>

- (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,
- (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

Ordinance	Ordinance No. 75686 adopted by the City Council on April 30, 1992. This ordinance outlines important financial requirements and calculations to use for determining rates and charges, flow of funds, pledged revenues toward debt service, debt coverage ratios and fund requirements
Pledged Revenues	The Net Revenues, plus any additional revenues, income, receipts, or other resources, including, without limitation any grants, donations, or income received or to be 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.
Potable Water	Water fit to drink.
SAWS 2017 Water Management Plan	A plan which addresses the San Antonio’s future needs by calling for investment in new supplies and a continued commitment to water conservation.
Senior Lien Obligations	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.
Sewershed	An area were the rain runoff flows are determined by curbs, storm drains, settling basins, pipes and outfalls to streams.
Sanitary Sewer Overflow (SSO)	A condition whereby untreated sewage discharged is into the environment prior to reaching sewage treatment facilities
Strategic Plan	Strategic plan is a process of identifying corporate goals and priorities. The Strategic Plan becomes a management tool used to help an organization ensure that members of the organization are working toward the same goals, and to assess and adjust the organization's direction in response to a changing environment. Strategic planning is a disciplined effort to produce fundamental decisions and actions that shape and guide what an organization is, what it does, and why it does it, with a focus on the future.

Subordinate Lien Obligations	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.
Swap	An exchange of streams of payments over time according to specified terms. The most common type is an interest rate swap, in which one party agrees to pay a fixed interest rate in return for receiving an adjustable rate from another party.
Tax Exempt Commercial Paper	An unsecured, short-term debt instrument maturing between 1 and 270 days, that provides the debt holders (bondholders) exemption from at least some taxes on the earnings at a local, state or federal level, or a combination thereof. The debt is usually issued at a discount, reflecting prevailing market interest rates. Tax-Exempt commercial paper is typically backed only by the issuer's promise to pay the face amount on the maturity date specified on the note.
Watershed	An area or ridge of land that separates waters flowing to different rivers and basins.
Water Supply Integration Pipeline	Approximately 45 miles of water transmission pipeline and a pump station that will convey water from SAWS' Twin Oaks Aquifer Storage and Recovery (ASR), Carrizo and Brackish Groundwater Desalination programs located at the SAWS Twin Oaks Facility property in south Bexar County to new and existing facilities in western and northwestern Bexar County.
Water Supply Fee	A consumption-based fee that funds the acquisition of new water sources to reduce San Antonio's dependence on the Edwards Aquifer.

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GLOSSARY OF ABBREVIATIONS

AMI	Advanced Metering Infrastructure
ASR	Aquifer Storage and Recovery
AWC	Average Winter Consumption - average water usage during three consecutive billing periods beginning after November 15 and ending on or about March 15 of each year
BGD	Brackish Groundwater Desalination
CCN	Certificates of Convenience and Necessity
CIP	Capital Improvement Program
COSA (CoSA)	City of San Antonio
CCTV	Closed circuit television
CFO	Chief Financial Officer
CMOM	Capacity Management Operation and Maintenance
COO	Chief Operating Officer
COVID-19	Coronavirus disease 2019
CP	Commercial Paper Program
CPMS	Capital Project Management System
CPS	City Public Service Energy
CWIP	Central Water Integration Pipeline
DEM	Dead end main
DSP	District Special Project (Formerly Bexar Metropolitan Water District)
EAA	Edwards Aquifer Authority
EAHCP	Edwards Aquifer Habitat Conservation Program
EARIP	Edwards Aquifer Recovery Implementation Program
EMT	SAWS Executive Management Team
EPA	U.S. Environmental Protection Agency
EST	Elevated Storage Tank
FTE	Full-time equivalent

GASB	Government Accounting Standards Board
GDP	Gross Domestic Product
GFOA	Government Finance Officers Association
GIS	Geographic Information System
GPCD	Gallons per capita per day
I/I	Inflow and infiltration
ITP	Incidental Take Permit
JBSA	Joint Base San Antonio
LS	Lift Station
MGD	Million gallons per day
MSA	Metropolitan Statistical Area
MYFP	Multi-year Financial Plan
O&M	Operations and Maintenance
OCCC	Owner Controlled Construction Changes
OPEB	Other Post-Employment Benefits
PLC	Programmable Logic Controllers
PZ	Pressure Zone
R&R	Renewal and Replacement
SAEDF	San Antonio Economic Development Foundation
SAWS	San Antonio Water System
SCADA	Supervisory Control and Data Acquisition system
SIFMA	Securities Industry and Financial Markets Association
SSLGC	Schertz-Seguin Local Governmental Corporation
SSO	Sanitary sewer overflow
SSORP	Sanitary sewer overflow reduction program
TCEQ	Texas Commission on Environmental Quality
TECP	Tax exempt commercial paper

TXDOT	Texas Department of Transportation
USFWS	U.S. Fish and Wildlife Service
WCTS	Wastewater collection and transmission system
WD	Water Delivery
WRC	Water Recycling Center
WRIP	Water Supply Integration Pipeline
WTPA	Water Transmission and Purchase Agreement
WW	Wastewater

