



2022

ANNUAL
OPERATING
BUDGET

& CAPITAL
IMPROVEMENT
PROGRAM

DRAFT Fiscal
Year Ending
December 31, 2022
San Antonio, Texas



ANNUAL OPERATING BUDGET AND CAPITAL IMPROVEMENT PROGRAM

FISCAL YEAR ENDING DECEMBER 31, 2022

DOUGLAS EVANSON
SENIOR VICE PRESIDENT & CHIEF FINANCIAL OFFICER

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GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished
Budget Presentation
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**San Antonio Water System
Texas**

For the Fiscal Year Beginning

January 01, 2021

Christopher P. Morill

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, 2021**. 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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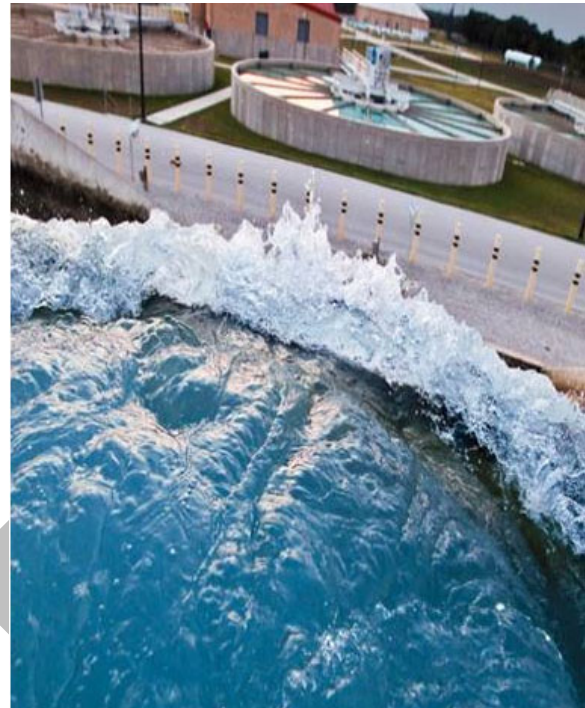
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CITY OF SAN ANTONIO
MAYOR AND CITY COUNCIL

Ron Nirenberg
Mayor

Manuel "Manny" Peláez
District 8

John Courage
District 9

Ana Sandoval
District 7

Clayton Perry
District 10

Melissa Cabello Havrda
District 6

Mario Bravo
District 1

Teri Castillo
District 5

Dr. Adriana Rocha Garcia
District 4

Phyllis Viagran
District 3

Jalen McKee-Rodriguez
District 2

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**SAN ANTONIO WATER SYSTEM
BOARD OF TRUSTEES**



Jelynn LeBlanc Burley
Chairwoman



Edward Belmares
Trustee



Amy Hardberger
Secretary



David McGee
Trustee



Mayor Ron Nirenberg
ex Officio



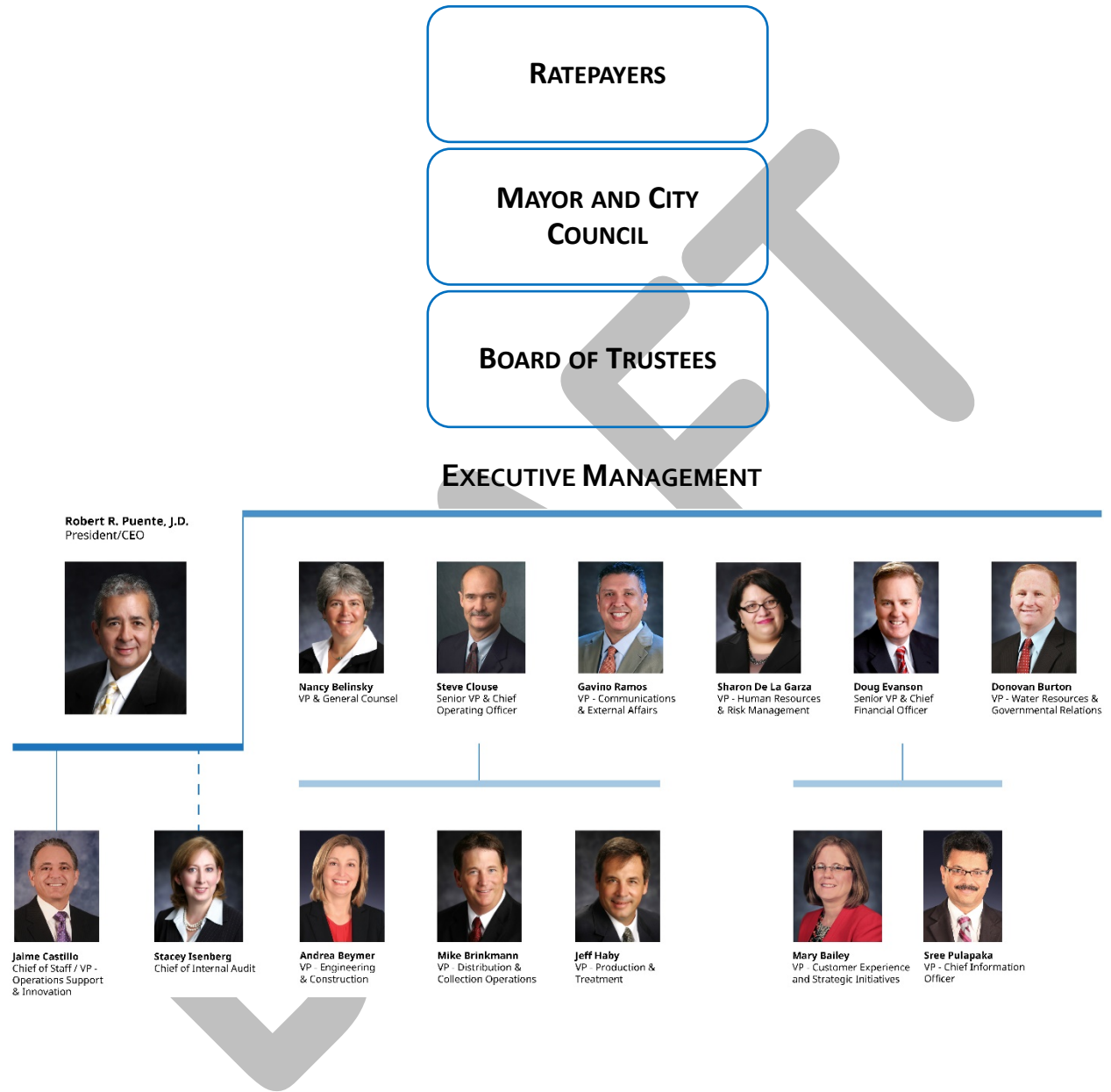
Eduardo Parra
Trustee



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SAN ANTONIO WATER SYSTEM ORGANIZATION CHART



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November 5, 2021

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

Honorable Mayor and Trustees:

I am pleased to present the 2022 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."

The 2022 budget is consistent with the Board's Strategic Plan and achieves the following key objectives:

- Sustain the delivery of affordable water and wastewater services in 2022 without any increases in rates for these core businesses as the community moves beyond the COVID-19/Delta Variant pandemic into recovery
- Make investments to improve the resiliency of SAWS infrastructure during future extreme weather events, such as those experienced by the community in February 2021
- Initiate implementation of the ConnectH2O Advanced Metering Infrastructure (AMI) 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 and restore the performance pay program
- Balance the need for strong financial metrics and the maintenance of credit ratings with the affordability of our services
- Improve the financial condition of SAWS Chilled Water business through the implementation of a 10% increase in the demand charge for Chilled Water customers. This adjustment will be the first increase in the demand charge rate since 1999 for Downtown customers and since 2005 for Port San Antonio customers.

The 2022 budget balances revenue requirements for the fiscal year ending December 31, 2022 with available revenues and other funding sources. Highlights of the 2022 budget include:

- Assumes 2022 billed water usage of 67.2 billion gallons, which is 3.2% more than 2021 budgeted water usage and 2.0% more than 2020 budgeted water usage. The increase over 2021 budget levels reflects strong growth in the number of residential customers, and a partial recovery from declines caused by the COVID-19 pandemic in commercial and industrial class usage.

- Assumes water customer growth of 1.8% and wastewater customer growth of approximately 1.6%. This is largely in line with SAWS' historical growth patterns from 2015 to 2019 but less than what has been experienced during the last couple of years.
- Includes estimated total Sources of Funds of \$939.7 million, which is \$30.3 million or 3.3% higher than the 2021 budgeted Sources of Funds and \$10.5 or 1.1% higher than the 2020 budgeted Sources of Funds. The estimated Sources of Funds for 2022 are comprised of the following:
 - Operating revenues totaling \$832.8 million
 - Non-Operating revenues totaling \$6.8 million
 - Capital recovery fees of \$100.1 million
- Provides for funding of \$470.2 million in operations and maintenance costs, reflecting an increase of \$16.1 million or 3.5% when compared to the 2021 Budget. The increase in O&M costs includes \$5.9 million in added Salaries and Benefits involving increased employee insurance costs and the restoration of performance pay, \$5.5 million in added maintenance expense to include necessary major maintenance expenses at the Steven M. Clouse Water Recycling Center (WRC) involving primary clarifiers, aeration basin diffusers and belt filter presses and \$1.3 million in added utilities expenses.
- Assumes funding for \$582.8 million in capital improvement projects
 - \$196.4 million in Wastewater projects
 - \$162.4 million in Water Delivery projects
 - \$218.1 million in Water Supply projects
 - \$5.9 million in Chilled Water projects
- Provides for \$11.85 million in capital outlay funding for vehicles, equipment and computer-related capital
- Provides for \$227.3 million in funding for debt service and expenses, which is \$3.9 million or 1.7% higher than the 2021 budget for debt service and expenses
- Projects 1.63 times debt coverage on total bonded debt
- Includes a transfer of \$32.2 million to the City of San Antonio to reflect SAWS 4.0% of gross revenues transfer payment to the City

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 2022 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

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BUDGET SUMMARY

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BUDGET SUMMARY

The 2022 Budget presents a comprehensive projection of San Antonio Water System (SAWS) operations from January 1, 2022 through December 31, 2022. This budget summary describes the key recommendations encompassing the 2022 Budget.

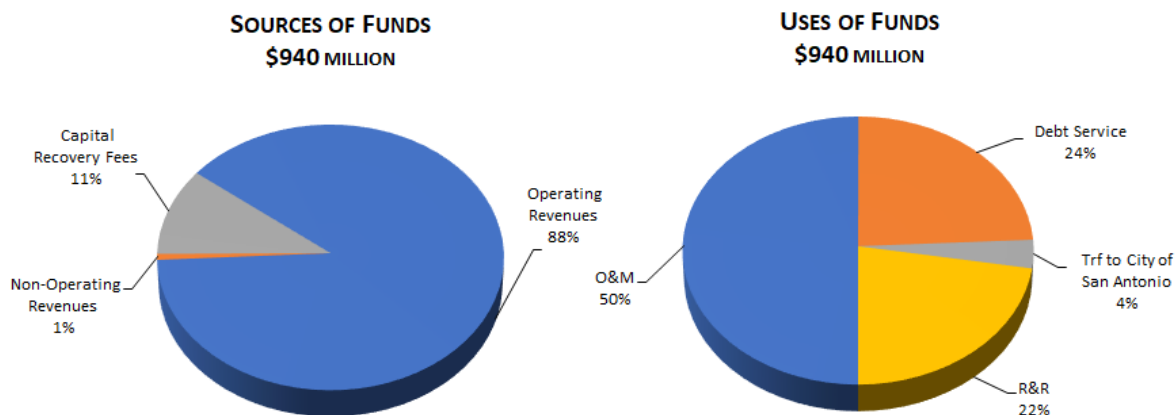
While the COVID-19 pandemic and the emergence of the Delta Variant continues to significantly impact communities across the world, the nation and in San Antonio, economic activity has rebounded to some degree since mid-2020. Despite this improvement, one of the primary objectives of SAWS 2022 Budget process is to continue to deliver affordable water and wastewater services without the need for an increase in water and sewer rates.

A summary of the 2022 revenue requirements, as well as the sources of funding to meet the requirements are provided in the table below.

	2021 Budget	2022 Budget	Change	% Change
Sources of Funds				
Operating Revenues	\$ 800.8	\$ 832.8	\$ 32.0	4.0%
Non-Operating Revenues	8.5	6.8	(1.7)	-20.0%
Capital Recovery Fees	100.1	100.1	-	0.0%
Total	\$ 909.4	\$ 939.7	\$ 30.3	3.3%
Uses of Funds				
Operations and Maintenance	\$ 454.0	\$ 470.2	\$ 16.2	3.6%
Debt Service and Expenses	223.4	227.3	3.9	1.7%
Transfer to City of San Antonio	30.9	32.2	1.3	4.2%
Available for Renewal and Replacement - Restricted	102.8	101.5	(1.3)	-1.3%
Available for Renewal and Replacement - Unrestricted	98.3	108.5	10.2	10.4%
Total	\$ 909.4	\$ 939.7	\$ 30.3	3.3%

The 2022 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:

- Implementation of infrastructure improvements to improve the resiliency of the Water Delivery system during extreme weather events such as those experienced in February 2021,
- Initiation of implementation of the ConnectH2O Advanced Metering Infrastructure (AMI) project in 2022,
- 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),
- Implementation of the Mitchell Lake Dam and Spillway Project to address U.S. Environmental Protection Agency (EPA) requirements to build a constructed wetland below Mitchell Lake to achieve compliance with permitted effluent limitations, 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 2022 O&M budget totals \$470.2 million. This is an increase of \$16.1 million, or 3.5% compared to \$454.0 million in 2021.

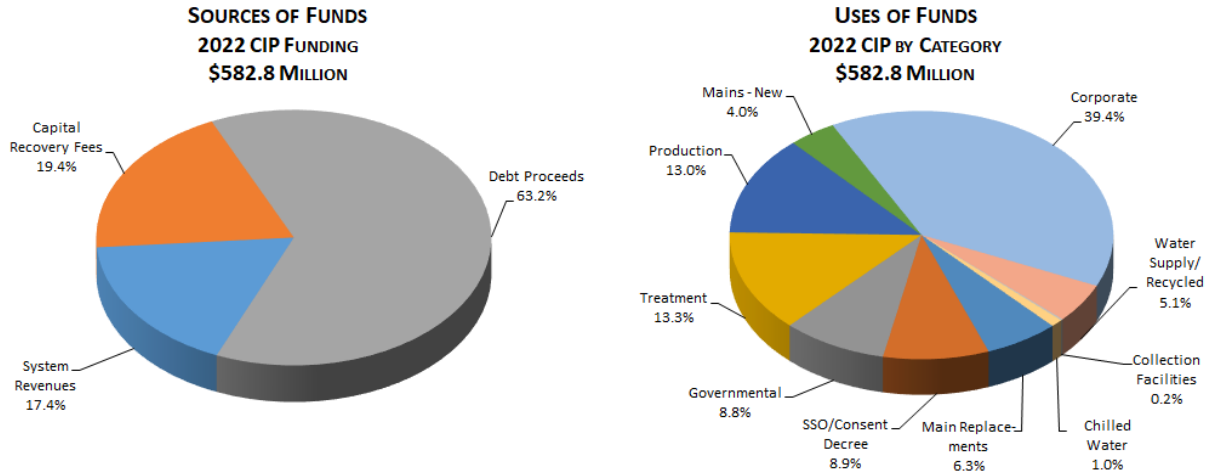
The increase in O&M costs includes \$5.9 million in added Salaries and Benefits costs associated with increased employee insurance costs and the restoration of performance pay for 2022, \$5.5 million in added maintenance expense to include necessary major maintenance expenses at the Steven M. Clouse Water Recycling Center (WRC) involving primary clarifiers, aeration basin diffusers and belt filter presses, \$1.3 million in added utilities expenses, \$800,000 for District Cooling System consultant services and \$750,000 for cybersecurity improvements.

CAPITAL IMPROVEMENT PROGRAM (CIP) HIGHLIGHTS

The projected 2022 Capital Improvement Program (CIP) totals \$582.8 million. The planned projects include:

- Improvements necessary to comply with the federal Consent Decree requiring major capital improvements to address SSOs,
- Improvements to enhance the resiliency of SAWS infrastructure during future extreme weather events, such as those experienced by the community in February 2021,
- Full-scale deployment of the ConnectH2O advanced metering infrastructure (AMI) project over the next several years,
- 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, and
- New water and sewer mains in support of growth within SAWS service area.

The 2022 budget assumes approximately 36.8% of the funds necessary to complete the 2022 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 the expenditure of this level of cash reserves is not anticipated to weaken 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 \$2.57 billion in capital improvements, a significant portion of which will be focused on improvements to our wastewater system in support of our obligations under the federal Consent Decree. Increasing amounts are also projected to be invested in improvements to SAWS’ water production and distribution infrastructure as well as to improve the resiliency of both water and sewer infrastructure during future extreme weather events such as those experienced by the community in February 2021. Finally, the implementation of SAWS Advanced Meter Infrastructure (AMI) initiative - ConnectH2O - is planned to begin full-scale deployment in 2022 with complete installation projected to take approximately five years.

Core Business/ Category (\$ in millions)	2022	2023	2024	2025	2026	Total 2022-2026
Water Delivery						
Corporate	\$ 2.8	\$ 2.8	\$ 2.8	\$ 2.9	\$ 3.0	\$ 14.3
Governmental	25.7	26.4	27.2	27.9	28.7	135.9
Mains - New	10.0	65.4	43.0	63.2	30.2	211.8
Main Replacements	36.5	30.0	44.1	45.7	69.6	225.9
Production	75.6	73.9	88.4	79.3	109.1	426.3
Overhead	11.8	11.8	11.8	11.8	11.8	59.0
Water Delivery Total	162.4	210.3	217.3	230.8	252.4	1,073.2
Wastewater						
Corporate	14.8	14.7	15.1	15.6	16.0	76.2
Governmental	25.7	26.4	27.2	27.9	28.7	135.9
Mains - New	51.9	14.9	4.3	18.1	4.6	93.8
Main Replacements	13.4	143.0	136.3	57.3	73.5	423.5
Collection Facilities	1.0	0.4	5.1	1.0	4.6	12.1
Treatment	77.5	65.1	78.0	64.6	64.6	349.8
Overhead	12.1	12.1	12.1	12.1	12.1	60.5
Wastewater Total	196.4	276.6	278.1	196.6	204.1	1,151.8
Water Resources						
Corporate	185.6	1.6	1.7	1.7	1.8	192.4
Desalination	-	-	-	0.9	-	0.9
Aquifer Storage & Recovery	26.8	2.1	9.8	15.4	4.0	58.1
Overhead	2.5	2.5	2.5	2.5	2.5	12.5
Water Resources Total	214.9	6.2	14.0	20.5	8.3	263.9
Recycled Water	3.2	18.9	3.5	21.3	7.1	54.0
Chilled Water	5.9	7.0	5.1	8.9	2.2	29.1
Grand Total	\$ 582.8	\$ 519.0	\$ 518.0	\$ 478.1	\$ 474.1	\$ 2,572.0

IMPACT ON RATES

One of the overarching goals of the 2022 Budget process is to continue full delivery of water and wastewater services without the need for an increase in water, sewer or recycled water rates.

With respect to Downtown and Port San Antonio, there has been no increase in the demand charge rate for Downtown customers since 1999 and no increase in the Port San Antonio demand charge since 2005. While the impact of the Chilled Water system is minimal to the otherwise exceptional financial stability of SAWS as a whole, the continuation of the current rates is not sustainable. SAWS has engaged a consultant to develop a business and rate plan, which should be available for the 2023 budget process. As an interim step toward improving the financial condition of the chilled water system, SAWS is recommending a rate increase of 10% for both Downtown and Port San Antonio customers in 2022. Board of Trustees and City Council action on this request is anticipated in November 2021. The City of San Antonio, the largest customer of the Downtown Chilled Water System, has accounted for the 10% increase in its FY 2022 Proposed Budget.

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STRATEGIC PLANNING, GOALS & OBJECTIVES

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STRATEGIC PLANNING, GOALS & OBJECTIVES

STRATEGIC PLANNING

SAWS Board and executive management are committed to continuing to provide high quality water and sewer services to this growing community. The mission and vision statements, combined with SAWS' intrinsic core values, guide the activities, goals and objectives of SAWS leadership team and workforce.

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

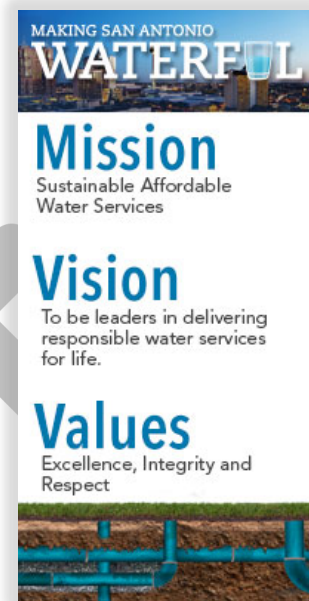
Long-range planning is critical for SAWS to accomplish its mission. Strategic priorities include, but are not limited to, water supply needs, system expansion, infrastructure replacement, environmental sustainability, system reliability, technological development, innovation and financial strength.

SAWS is a part of the South Central Texas Regional Water Planning Group, Region L. This group is one of 16 Texas water-planning groups established by the Texas Water Development Board to develop regional water plans as required by Senate Bill 1 of the 75th Legislative Session. This group is tasked with developing a regional water plan, which identifies both short and long-term water supply needs and recommends water management strategies for addressing them. The regional plan provides for water conservation and drought management policies while ensuring the health of the public, economy and the natural environment.

Additionally, SAWS updates its own Water Management Plan every five years to specifically meet San Antonio's future water needs by incorporating changes in population, water demand patterns, regulations and water supply options. The combined impacts of geography, geology and climate impact both water supply and water demand in complex ways. SAWS deploys a variety of strategies to manage these challenges that include supply diversification, the addition of drought-firm supplies, and reducing weather-related water demand through focused water conservation initiatives. Acknowledging that the climate may become more challenging in the future, the 2017 Water Management Plan includes comprehensive preparations for historic drought scenarios, by merging the duration of the 1950's Drought of Record with the intensity of the more recent 2011-2014 drought. SAWS plans to have water security in the driest of dry times through at least 2050.

In collaboration with the City of San Antonio and CPS Energy, SAWS is implementing new resiliency measures to account for changing climatic conditions and to further enhance its overall service reliability. SAWS also enforces the regulatory requirements established to protect regional water quality as well as its wastewater operations.

A crucial component of SAWS strategic plan is its comprehensive 20-year multi-year financial plan, which serves as the foundation for SAWS' overall planning efforts. Executive management evaluates the outcome scenarios to reach the optimum balance of limited resources with organizational needs and customer concerns. The strategic planning process guides the development of the budget and the five-year capital improvement plan to ensure that necessary resources are provided to implement the identified objectives.

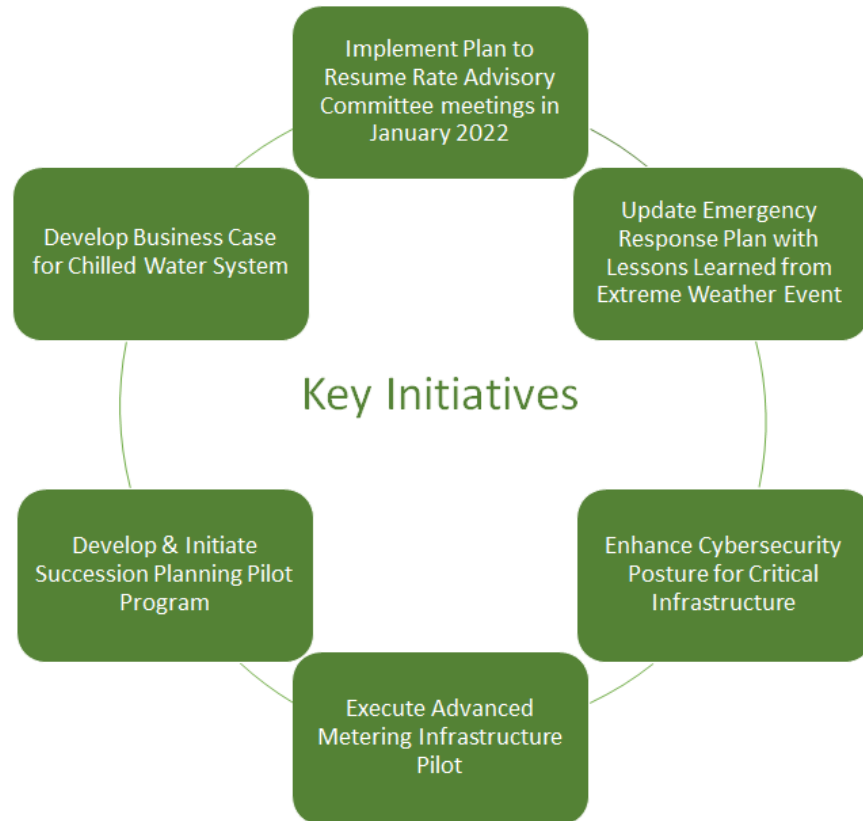


STRATEGIC GOALS & OBJECTIVES

In 2019, SAWS undertook an initiative to track its strategic goals through a tiered metric program. In coordination with an outside consulting firm, the SAWS Board of Trustees and executive management developed the following six strategic goals. These goals serve as the foundation for all of SAWS' activities and support the budget objectives each year.



In addition to these overarching strategic goals, the process also requires the identification of current year “Key Initiatives”, which ultimately shape the long-term future of SAWS. The 2021 key initiatives are as follows:



Tier 1 objectives were identified for the Strategic Goals. In addition, strategic measures were developed to assist in the evaluation of the degree to which the objectives were achieved.

For 2021, SAWS also began tracking Tier 2 objectives that were directly correlated to the performance of each respective Tier 1 objective. These Tier 2 objectives also serve as predictive indicators of any unfavorable data trends. Tier 2 objectives/metrics are reported to the Office of the CEO, while Tier 1 objectives/metrics are reported to the Board. Although Tier 2 metrics have been developed, historical data is still being analyzed in order to appropriately establish targets for these metrics.

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.
- Validate the result is communicated and approved.

The 2020 actual Tier 1 and Tier 2 metrics along with the metric threshold and target for 2021 are reported in the following chart.

Strategic Goals	Objective	Department	Metrics	2020	2021 & 2022	
				Actual	Threshold	Target
Customer Service & Community Accountability	Tier 1					
	Customer Satisfaction Score	Customer Service	Baselice Customer Survey Results	91.0%	80.0%	82.0%
	Reputation Management	Communications & External Affairs	Baselice Customer Survey Results	71%	70%	73%
	Tier 2					
	Community Outreach	Communications & External Affairs	# of Community Outreach Events	371	TBD	TBD
	Complaints per 1,000 Accounts	Customer Service	# of Escalated Service Requests plus Complaint emails / (# of Residential Accounts + Non-Residential Accounts)	0.043%	TBD	TBD
Financial Efficiency and Affordability	Tier 1					
	Service Affordability	Financial Services	(Annual Residential W&WW Rates * Rolling 5-Year Avg. W&WW Consumption + Fees) / Annual Median Household Income for Metro Area Served	44.0%	50%	45%
	Tier 2					
	Total O&M Cost of Water	Financial Services	Total O&M Cost of Potable Water Services / Average # of Accounts	\$32.13	TBD	TBD
	Total O&M Cost of Wastewater	Financial Services	Total O&M Cost of Wastewater Services / Average # of Accounts	\$18.46	TBD	TBD
Employee Engagement	Tier 1					
	Total Recordable Incident Rate	Human Resources	(# of OSHA Reportable Incidents * 200,000) / # of Productive Work Hours	3.15	4.29	3.15
	Employee Engagement	Human Resources	Engage Survey Results	63%	51%	53%
	Tier 2					
	Days Away, Restricted or Transferred	Human Resources	(# of OSHA Recordable injuries & illnesses resulting in Days Away * 200,000) / Hours Worked	2.50	TBD	TBD
	Survey Participation Rate	Human Resources	(# of Survey Responses / # of Surveys Sent)	65%	TBD	TBD
Water Stewardship	Tier 1					
	Gallons per person per day (GPCD)	Water Resources	(Total System Input Volume / Retail Population Served) / 365	117	120	117
	Tier 2					
	Infrastructure Leak Index (ILI)	Water Resources	(5.4 * miles of mains) + (0.15 * # of active and inactive connections) * (Avg annual system pressure * 365) {AWWA/TWDB Audit Figures}	2.7	TBD	TBD
Operational Excellence	Tier 1					
	Regulatory Compliance	Water Resources	# Unique Notice of Enforcements Issued by TCEQ, EPA and ECAP	0	1	0
	Water Quality and Reliability	Water Resources	# of Unique Boil Water Advisories issued by SAWS	0	3	2
	Wastewater Control (Sanitary Sewer Overflows SSOs)	Production & Treatment	# of SSOs & Plant Permit Violations (Excluding Mitchell Lake and 0800 Violations)	147	252	204
	Tier 2					
	Regulatory Compliance	Water Resources	# Unique Notice of Violations Issued by TCEQ, EPA and ECAP	4.67	TBD	TBD
	Distribution System Sampling	Water Resources	Positive coliform samples, within the SAWS public water systems	0.19%	TBD	TBD
	System Maintenance	Production & Treatment	# of Miles of WW Mains Cleaned	897	TBD	TBD
Execution to Planned	Engineering	# of Miles of Condition & Capacity Projects Completed / # of Miles of Condition & Capacity Projects Planned	95.5%	TBD	TBD	

FUTURE ROADMAP

Results of the validation process were documented on the 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 targets for Tier 2 Metrics to ensure alignment with SAWS' overall strategic goals and objectives.

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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)
- 286 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 (1991-2020), 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 169,000 students.

Institution	Certified Fall 2019	Preliminary Fall 2020	Change	Percent Change
Texas State University	38,187	37,849	(338)	-0.89%
University of Texas at San Antonio	32,389	34,429	2,040	6.30%
San Antonio College	19,499	18,847	(652)	-3.34%
Northwest Vista College	18,010	18,186	176	0.98%
St. Philip's College	12,962	12,621	(341)	-2.63%
Palo Alto College	10,763	10,950	187	1.74%
University of the Incarnate Word	7,734	7,104	(630)	-8.15%
Texas A&M University-San Antonio	6,714	6,786	72	1.07%
Northeast Lakeview College	6,540	6,551	11	0.17%
St. Mary's University	3,485	3,458	(27)	-0.77%
Wayland Baptist University	2,948	2,539	(409)	-13.87%
Univ. of Tex. Health Science Ctr. at San Antonio	3,383	3,464	81	2.39%
Our Lady of the Lake University	2,974	2,797	(177)	-5.95%
Trinity University	2,685	2,685	-	0.00%
Texas Lutheran University	1,474	1,446	(28)	-1.90%
Total	169,747	169,712	(35)	-0.02%

Source: Texas Higher Education Coordinating Board

ECONOMY

The COVID-19 pandemic profoundly disrupted the local economy and reduced employment in the world, the nation and in the San Antonio area in 2020. The significant reduction in infections resulting from the pandemic in the spring of 2021, which coincided with the national vaccination rollout helped spur local economic activity toward 2019 pre-pandemic levels. However, the introduction of the Delta Variant of the COVID-19 virus during the summer of 2021 has created an atmosphere of uncertainty that may adversely affect the gains made earlier in 2021, both nationally and locally.

For the nation as a whole, economic activity has greatly improved during the first two quarters of 2021. In August, the U.S. Bureau of Economic Analysis (BEA) reported real gross domestic product (GDP) increased at an annual rate of 6.6 percent in the second quarter of 2021 as compared to the first quarter. This increase followed a similar 6.3 percent growth in the real GDP from fourth quarter 2020 to first quarter 2021.

Following the strong economic rebound during the first half of 2021, the Conference Board expects the recovery to continue, but moderate somewhat through the remainder the year. The Board's growth forecast for the full year has been downgraded from 6.6 percent (year-over-year) due to lower-than-expected economic growth in the third quarter of 2021. Looking further ahead, the Board forecasts economic growth of 4.0 percent (year-over-year) in 2022 and 3.0 percent (year-over-year) in 2023. The forecasts for both years have been upgraded due to the Board's expectations that the recovery period will be extended into 2022 and that a large government infrastructure investment package will be passed soon.

Optimism for the national economy can also be found in the fact that the U.S. Unemployment Rate stands at 5.4% as of July 2021 compared to 6.7% as of December 2020 and to 14.8% at the height of the pandemic in April 2020.

Locally, the economy in the San Antonio Metropolitan Statistical Area (MSA) continues to rebound since the onset of the pandemic early last year. Overall, as of July 2021, total non-farm employment in the MSA has increased by 14,700 jobs or 1.4% since December 2020. The unemployment rate within the MSA declined from 13.1% in April of 2020 to 6% by the end of 2020 and has held relatively steady at this level during the first half of 2021. It appears that overall economic activity is gradually improving aided by the fact that San Antonio boasts widely diversified group of industries that have major operations in the city, including aerospace, bioscience/healthcare, environmental/green technology, financial services, information technology/cyber security, manufacturing and military/defense. All of these industries are supported by the city's commitment to make needed 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.

EMPLOYMENT

The San Antonio economy experienced consistent, sustained growth from 2011 until the onset of the pandemic and, consequently, is well positioned to resume that growth as the pandemic abates.

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 9,900 jobs (as of the end of 2020 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 92,900 jobs in the local area as of the end of July 2021. Despite a 7.7% employment reduction since the end of 2019, overall employment in these subsectors has increased by 12.9% 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 94,800 persons as of the end of July 2021. While there has been a slight 0.42% employment reduction since the end of 2019, overall employment in the sector has increased by over 31.8% since the end of 2011.

INFORMATION TECHNOLOGY/CYBER SECURITY

The Information Technology/Cyber Security industry plays a stable employment role in San Antonio. According to the Greater San Antonio Chamber of Commerce, San Antonio is the second largest cyber hub in the United States. During the period from 2011 to 2019, the number of local jobs within the industry has fluctuated around 20,000. As of July 2021, the sector had 18,500 jobs reflecting a 1.1% increase 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 52,800 people in the San Antonio area as of July 2021. This sector has grown by 13.5% overall since the end of 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 to include 34,110 military active duty/reserve personnel and 25,127 Department of Defense civilians, 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.

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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. The 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

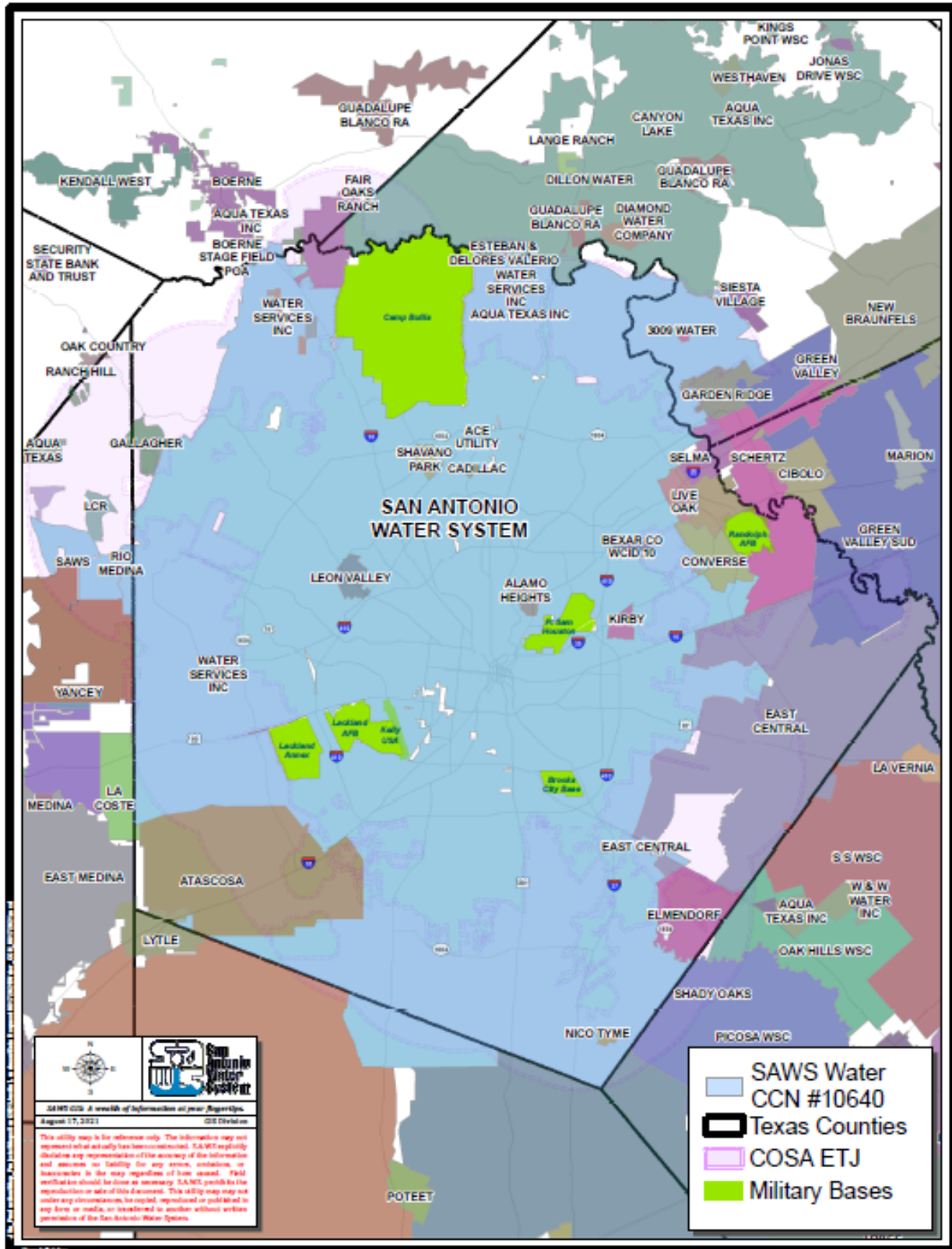
SAWS' water delivery service area currently extends over approximately 929 square miles, making it the largest water purveyor in Bexar County. The service area includes most of Bexar County, several suburban municipalities and parts of adjacent counties. In addition to serving its own retail customers, 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 July 31, 2021, the water delivery system provides potable water service to 539,322 customer connections.

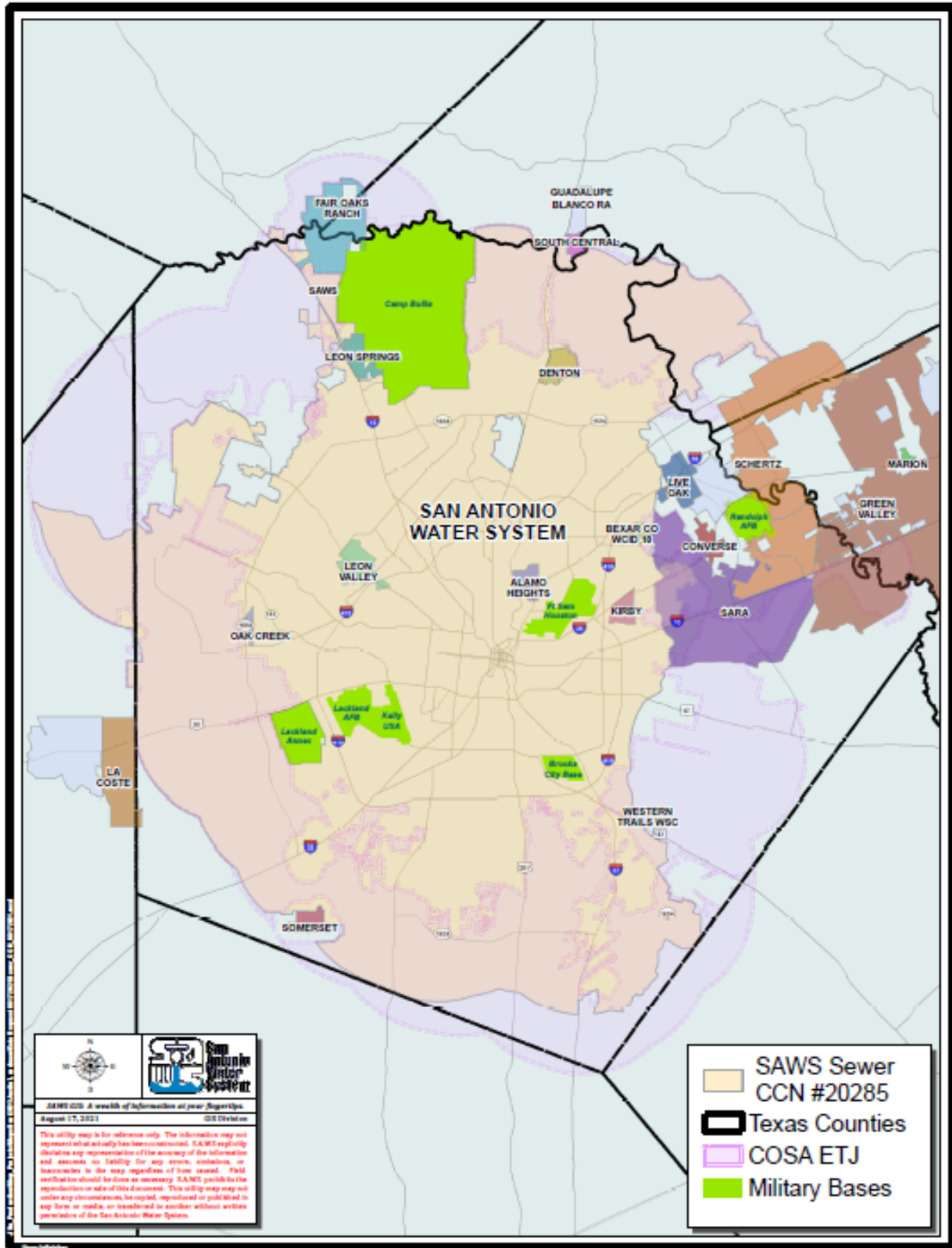
The water delivery system currently utilizes 120 elevated and ground storage tanks with a combined storage capacity of 308.4 million gallons. The system also includes the water treatment plant operating at the Agua Vista Station which receives, treats and transmits water received from the Vista Ridge Pipeline Project. As of July 31, 2021, SAWS had installed 7,462 miles of water lines, ranging in size from 1 inch to 96 inches in diameter and 43,896 fire hydrants were in service.

A somewhat different area, following natural watersheds, is defined for SAWS' wastewater collection and treatment service area, which covers an area of approximately 854 square miles. 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. As of July 31, 2021, SAWS provides wastewater services to 482,297 customer connections, including 12 wholesale sewer connections through a collection system composed of 5,751 miles of sewer 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.

WATER SERVICE AREA



WASTEWATER SERVICE AREA



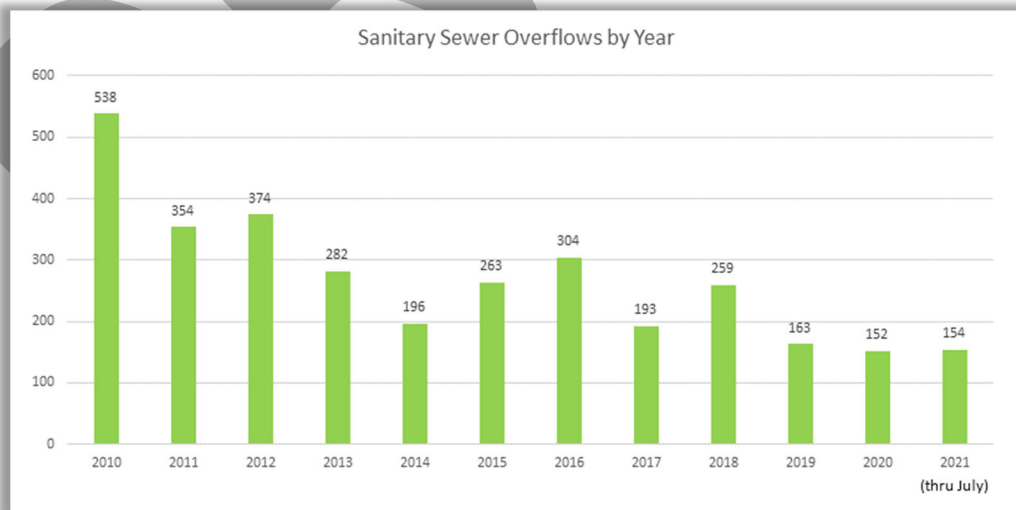
CHILLED WATER SYSTEM

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, including 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 required additional work over the subsequent 10 to 12 year period 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 required. 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 only to be surpassed by the 152 recorded SSOs during 2020.



As a result of large rain events occurring earlier this year as well as the impacts of Winter Storm Uri, total SSOs through July of 2021 have exceeded the 2020 total.

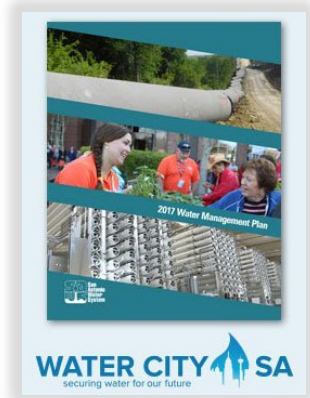
The 2022 O&M budget includes \$28.3 in operating costs related to program management, televising and cleaning sewer mains, capacity assessment activities, and repair of sewer infrastructure. Additionally, \$51.9 million in capital project investments are planned in 2022 to continue to rehabilitate aging sewer infrastructure and address system capacity issues.

SAWS has performed its obligations and 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 required under the terms of the consent decree is the W-6 Upper Segment – Highway 90 to Southwest Military project. This project will necessitate the construction of over five miles of up to 104-inch gravity sewer 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.

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, water supply 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. As this plan is updated approximately once every five years, it is currently anticipated that an update to this plan will take place during 2022.

CURRENT SOURCES OF WATER SUPPLY

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

Available Sources of Water Supply Budgeted for 2022 Under Non-Drought Conditions	
Source	Acre-Feet
Edwards Aquifer	268,108
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	6,300
Medina Surface Water	-
Total	452,197

EDWARDS AQUIFER

The largest amount of SAWS water holdings is Edwards Aquifer permitted groundwater withdrawal rights. In 2022, SAWS has budgeted for a total inventory of 268,108 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 in any given year may range from 0% to 44%. The following table shows annual cutbacks and average aquifer level (median sea level) for the last five years.

Year	EAA Cutback	J-17 Index Well Average Level
2017	3.40%	670.5'
2018	8.68%	664.3'
2019	0.00%	677.2'
2020	6.25%	664.5'
2021	3.30%*	662.6'*

* Year to date average as of July 29, 2021

As of July 29, 2021, the J-17 Index Well was at 667.4' and was slightly decreasing due to increased demand. EAA had not issued any daily critical period cutbacks due to the 10-day Edwards aquifer level being 669.6'.

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 during wet times or periods of low customer demand. This water can be recovered during periods of drought in order to augment SAWS' available water supplies to meet customer demands. As of July 29, 2021, 176,821 acre-feet of Edwards Aquifer water has been 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. Over a four-year period, these entities 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 direct 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). SAWS' Regional Carrizo project is located in Gonzales County, approximately 50 miles from San Antonio. This partnership with SSLGC 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 directly 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. Current plans provide for future phases to be construction around the 2040 timeframe 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 also 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 (which is the expectation of both SAWS and the Vista Ridge LLC), will account for approximately 20% of the potable water distributed by SAWS.

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 Year 1, a total of \$81.9 million was budgeted in 2020 for the first eight and a half months of operations. Year 2 (2021) and Year 3 (2022) budgeted operating and maintenance costs are listed in the table below. In 2022, a total of \$103.5 million is budgeted for 50,000-acre feet (approximately \$2,070 per acre foot). In addition to the \$80.3 million for contractually required water payments (based on \$1,606 CRGWUP), SAWS will pay an estimated \$11.5 million in operations and maintenance costs associated with the production and delivery of the Project water, as a direct pass-through under the WTPA, approximately \$8.1 million for utility expenses and approximately \$3.3 million to support operations of its Agua Vista Station.

Vista Ridge and Agua Vista Budget					
\$ in Millions					
Facility	Expenditure	2021	2022	Difference	
Vista Ridge	Water Payment	\$ 80.30	\$ 80.30	\$ -	
	O&M Payment	12.55	11.53	(1.02)	
	Staffing Cost	0.45	0.08	(0.37)	
	Utilities Cost	10.18	8.13	(2.05)	
	Other Costs	0.46	0.15	(0.31)	
Subtotal		\$ 103.94	\$ 100.19	\$ (3.75)	
Agua Vista Station	Staffing Cost	\$ 0.92	\$ 1.03	0.11	
	Utilities Cost	1.10	0.62	(0.48)	
	Chemical Cost	2.05	1.28	(0.77)	
	Other Costs	0.79	0.38	(0.41)	
Subtotal		\$ 4.86	\$ 3.31	\$ (1.55)	
Total		\$ 108.80	\$ 103.50	\$ (5.30)	

At the end of the 30-year Operational Phase, the well field, 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 approximately 117 gallons per capita 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 deliver 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 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 million gallons per day (MGD).

Central Water Integration Pipeline

The Central Water Integration Pipeline (CWIP) project was designed to facilitate the conditioning, conveyance and distribution of the Vista Ridge water throughout the SAWS water transmission and distribution system. The 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 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 in need of major renovations.

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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 2022 Operating Budget. Capital Improvement Program financial projections are not appropriated. Any amendments to the 2022 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.

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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 SAWS financial planning, analysis and strategy development is to continue to maintain SAWS financial position while also meeting 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, as well as improved resilience during extreme weather events. 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 purpose 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 outstanding, percentage of capital financed with cash and overall level of cash balances.

2022 BUDGET PROCESS

The 2022 budget process began with identifying SAWS’ short-term priorities. The focus of the 2022-2026 financial forecast included the following objectives:

- Infrastructure is adequately maintained to ensure reliability of service and compliance with regulatory requirements, including additional infrastructure investments to improve service resilience during extreme weather events, such as those experienced in February 2021.
- Employee pay and benefits are fair and competitive
- Retirement obligations are valued appropriately and adequately funded
- 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 2022 revenue forecast.

Revenue Source	Drivers
Operating Revenues	Mitigate impacts of sustained periods of above normal rainfall
	Strong customer growth and rebounding demand that was negatively impacted from COVID
	Effect of conservation programs and tiered water rates on customer usage
	Continued COVID-19 driven changes in customer behavior and economic growth
Non-Operating Revenues	Anticipated sustained low short-term interest rates
Capital Recovery Fees	Utilized for capital funding - projected to remain strong, dependent on development activity

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 2022 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 2022. The Current Services Level budget served as the baseline for all subsequent 2022 budget changes and was developed from the following components:

- Snapshot of employee wage and benefit costs as of May 2021
- Estimated 2022 utility costs, including a provision for any electric and gas utility rate increases
- Estimated 2022 fuel costs
- Elimination of one-time 2021 budgeted expenses

Improvements and/or Mandates

Departments requiring additional funding for improvements or newly identified mandates that exceeded the 2022 Current Services Level were required to submit decision packages to include detailed justification for each specific request.

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, 2021 spending levels were compared to proposed 2022 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 2022 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 & Collection 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
Safety - Loss of life or limb	Safety - Risk of injury	Corporate initiatives
Legal/Regulatory requirements	Legal/Regulatory implications	City or State conflicts
High customer dissatisfaction	Medium customer dissatisfaction	Slight 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 2022 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 and deployment of the ConnectH2O/AMI project. These projects were also carefully evaluated, and projects that could be delayed to future years were not included in the 2022 CIP.

Overall, the 2022 CIP has 82% of projects prioritized as Mandatory, 18% 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	\$ 101,842,663	\$ 60,519,542	\$ -	\$ 162,362,205
Wastewater	180,240,756	14,597,600	1,542,000	196,380,356
Water Resources	194,694,878	23,230,744	205,600	218,131,222
Chilled Water	331,584	5,592,320	-	5,923,904
2022 CIP Total	\$ 477,109,881	\$ 103,940,206	\$ 1,747,600	\$ 582,797,687

The 2022 CIP has been developed using recent cost estimates to include SAWS overhead expenses and an annual inflation assumption of 2.8% for 2022 and future years. The 2022 and 5-year CIP project lists were reviewed in detail, and final selection was recommended by the SAWS Executive Management Team.

The 2022 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 changes in the cost and/or the availability of funding, project needs and emergencies.

2022 BUDGET TIMELINE

Action		2021				2022
		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 2022 annual budget				■	■
	Submit Budget to City Council for review and Chilled Water rates approval					■
Implementation	2022 Annual Operating Budget and Capital Improvement Program and Chilled Water rates become effective					■

SHORT-TERM FIVE-YEAR FORECAST

The current projection of SAWS sources and uses of funds for the period 2022 – 2026 is shown in the table below.

<i>\$ in Millions</i>	2022 Budget	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast
Sources of Funds					
Revenue, incl. prior adjustments	\$ 832.8	\$ 842.5	\$ 874.8	\$ 915.7	\$ 971.9
Rate Adjustment, incremental	-	19.1	30.1	46.6	23.3
Nonoperating Revenues	6.8	8.5	10.1	10.0	9.4
Draw on Equity	-	-	-	-	-
Capital Recovery Fees	100.1	100.1	100.1	100.1	100.1
Total Sources of Funds	\$ 939.7	\$ 970.2	\$ 1,015.1	\$ 1,072.4	\$ 1,104.7
Uses of Funds					
Operations and Maintenance	\$ 470.2	\$ 476.4	\$ 482.6	\$ 490.7	\$ 499.8
Debt Service & Expenses	227.3	250.3	278.0	303.9	323.4
Transfer to City of San Antonio	32.2	33.4	35.2	37.5	38.8
Available for R&R Restricted	101.5	101.7	102.2	102.4	102.4
Available for R&R Unrestricted	108.5	108.4	117.1	137.9	140.3
Total Uses of Funds	\$ 939.7	\$ 970.2	\$ 1,015.1	\$ 1,072.4	\$ 1,104.7

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.

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 2022 – 2026 capital improvement program is projected at \$2.57 billion as shown below. Significant priorities include wastewater capital replacement projects associated with the wastewater Sanitary Sewer Overflow Reduction Program (SSORP), improvements to improve the resiliency of SAWS infrastructure during extreme weather events, and deployment of ConnectH₂O AMI.

CIP by Core Business (\$ in millions)	2022	2023	2024	2025	2026	Total 2022-2026
Water Delivery	\$ 162.4	\$ 210.3	\$ 217.3	\$ 230.8	\$ 252.4	\$ 1,073.2
Wastewater	196.4	276.6	278.1	196.6	204.1	1,151.8
Water Supply	218.1	25.1	17.5	41.8	15.4	317.9
Chilled Water	5.9	7.0	5.1	8.9	2.2	29.1
Total	\$ 582.8	\$ 519.0	\$ 518.0	\$ 478.1	\$ 474.1	\$ 2,572.0

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 2022-2026 five-year forecast, the percentage of the capital improvements funded with non-debt sources is currently projected to average 37.3%

(\$ in millions)	2022	2023	2024	2025	2026
CIP Budget					
Total Budget	\$ 582.8	\$ 519.0	\$ 518.0	\$ 478.1	\$ 474.1
CIP Funding Source					
Revenue/Renewal & Replacement	17.4%	18.6%	18.7%	22.1%	26.5%
Capital Recovery Fees	19.4%	15.4%	17.4%	18.9%	12.9%
Bonds/Commercial Paper	63.2%	66.0%	63.9%	59.1%	60.6%
Cash Funding	\$ 214.3	\$ 176.6	\$ 186.8	\$ 195.8	\$ 186.9
Debt Funding	\$ 368.5	\$ 342.4	\$ 331.2	\$ 282.3	\$ 287.2

The forecasted amounts for 2022-2026 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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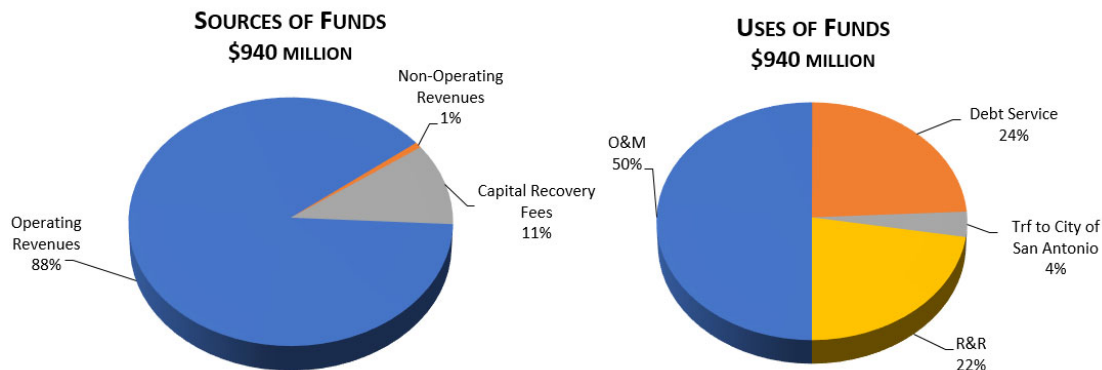
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ANNUAL OPERATING BUDGET

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>	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
SOURCES OF FUNDS				
Operating Revenues				
Sewer Service Charges	\$ 270,831	\$ 263,650	\$ 272,732	\$ 282,330
Metered Water Sales	234,470	228,350	227,553	239,483
Water Supply Fee	168,227	246,486	244,024	253,993
EAA Fee	23,421	23,165	23,731	22,773
Chilled Water Sales	10,615	9,894	10,415	10,500
Conservation	12,062	12,232	10,791	11,001
Industrial Waste Surcharge	6,370	5,626	5,118	5,886
Recycled Water System	6,050	6,518	6,413	6,694
Stormwater	4,828	3,554	5,235	5,728
Recovery of TCEQ Fees	2,223	2,377	2,548	2,610
Reduction for Affordability Program	(5,918)	(6,935)	(7,802)	(8,193)
Total Operating Revenues	733,179	794,917	800,758	832,805
Nonoperating Revenues	25,451	14,298	6,500	4,800
Build America Bonds Subsidy	3,317	1,917	2,022	2,023
Total Revenues	761,947	811,132	809,280	839,628
Capital Recovery Fees	94,641	119,571	100,075	100,074
Contributions in Aid of Construction	9,259	3,205	-	-
Draw on Equity	1,400	-	-	-
Total Sources of Funds	\$ 867,247	\$ 933,908	\$ 909,355	\$ 939,702
USES OF FUNDS				
Operations and Maintenance	\$ 339,934	\$ 401,961	\$ 454,048	\$ 470,166
Revenue Bond Debt Requirement	202,211	205,432	218,422	223,911
Other Debt Service Requirement	4,879	3,379	4,932	3,385
Transfer to the City of San Antonio	21,918	31,043	30,931	32,206
Balance Available for:				
Renewal and Replacement Fund (Restricted)	110,001	138,280	102,779	101,465
Renewal and Replacement Fund (Unrestricted)	188,304	153,813	98,243	108,569
Total Uses of Funds	\$ 867,247	\$ 933,908	\$ 909,355	\$ 939,702



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 2022 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	\$ -	\$ -	\$ 282,330	\$ -	\$ 282,330
Metered Water Sales		239,483			239,483
Water Supply Fee	253,993				253,993
EAA Fee	22,773				22,773
Chilled Water Sales				10,500	10,500
Conservation	11,001				11,001
Industrial Waste Surcharge			5,886		5,886
Recycled Water System	6,694				6,694
Stormwater	5,728				5,728
Recovery of TCEQ Fees		1,987	623		2,610
Reduction for Affordability Program	(2,602)	(1,588)	(4,003)		(8,193)
Intercompany Reallocations	5,630	(5,630)			-
Total Operating Revenues	303,217	234,252	284,836	10,500	832,805
Nonoperating Revenues	1,440	1,440	1,920		4,800
Build America Bonds Subsidy	635	579	809		2,023
Total Revenues	305,292	236,271	287,565	10,500	839,628
Capital Recovery Fees	38,363	30,100	31,611		100,074
Draw on Equity	-	-	-	-	-
Total Sources of Funds	\$ 343,655	\$ 266,371	\$ 319,176	\$ 10,500	\$ 939,702
USES OF FUNDS					
Operations and Maintenance	\$ 239,424	\$ 99,095	\$ 124,314	\$ 7,333	\$ 470,166
Revenue Bond Debt Requirement	39,659	85,077	95,707	3,468	223,911
Other Debt Service Requirement	463	1,348	1,511	63	3,385
Transfer to the City of San Antonio	10,895	9,425	11,466	420	32,206
Balance Available for:					
Renewal and Replacement Fund (Restricted)	39,099	30,571	31,795		101,465
Renewal and Replacement Fund (Unrestricted)	14,115	40,855	54,383	(784)	108,569
Total Uses of Funds	\$ 343,655	\$ 266,371	\$ 319,176	\$ 10,500	\$ 939,702

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>	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
SOURCES OF FUNDS				
Operating Revenues				
Water Supply Fee	\$ 168,227	246,486	244,024	253,993
EAA Fee	23,421	23,165	23,731	22,773
Conservation	12,062	12,232	10,791	11,001
Recycled Water System	6,050	6,518	6,413	6,694
Stormwater	4,828	3,554	5,235	5,728
Reduction for Affordability Program	(1,376)	(1,903)	(2,478)	(2,602)
Intercompany Reallocations	5,630	5,630	5,630	5,630
Total Operating Revenues	218,842	295,682	293,346	303,217
Nonoperating Revenues	6,923	4,179	1,950	1,440
Build America Bonds Subsidy	854	598	635	635
Total Revenues	226,619	300,459	295,931	305,292
Capital Recovery Fees	37,792	48,064	38,363	38,363
Contributions in Aid of Construction				
Draw on Equity	1,400	-	-	-
Total Sources of Funds	\$ 265,811	\$ 348,523	\$ 334,294	\$ 343,655
USES OF FUNDS				
Operations and Maintenance	\$ 124,722	\$ 183,032	\$ 237,254	\$ 239,424
Revenue Bond Debt Requirement	45,197	40,746	38,658	39,659
Other Debt Service Requirement	961	800	560	463
Transfer to the City of San Antonio	5,869	10,777	10,489	10,895
Balance Available for:				
Renewal and Replacement Fund (Restricted)	37,907	60,893	39,356	39,099
Renewal and Replacement Fund (Unrestricted)	51,155	52,275	7,977	14,115
Total Uses of Funds	\$ 265,811	\$ 348,523	\$ 334,294	\$ 343,655

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>	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
SOURCES OF FUNDS				
Operating Revenues				
Metered Water Sales	\$ 234,470	\$ 228,350	\$ 227,553	\$ 239,483
Recovery of TCEQ Fees	1,743	1,882	1,962	1,987
Reduction for Affordability Program	(1,380)	(1,526)	(1,512)	(1,588)
Intercompany Reallocations	(5,630)	(5,630)	(5,630)	(5,630)
Total Operating Revenues	229,203	223,076	222,373	234,252
Nonoperating Revenues	7,343	5,078	1,950	1,440
Build America Bonds Subsidy	1,022	550	578	579
Total Revenues	237,568	228,704	224,901	236,271
Capital Recovery Fees	25,022	33,458	30,100	30,100
Contributions in Aid of Construction	8,210	672	-	-
Draw on Equity	-	-	-	-
Total Sources of Funds	\$ 270,800	\$ 262,834	\$ 255,001	\$ 266,371
USES OF FUNDS				
Operations and Maintenance	\$ 92,551	\$ 95,644	\$ 93,333	\$ 99,095
Revenue Bond Debt Requirement	72,288	74,297	80,263	85,077
Other Debt Service Requirement	2,486	2,078	2,034	1,348
Transfer to the City of San Antonio	7,195	-	8,957	9,425
Balance Available for:				
Renewal and Replacement Fund (Restricted)	34,825	34,341	30,800	30,571
Renewal and Replacement Fund (Unrestricted)	61,455	56,474	39,614	40,855
Total Uses of Funds	\$ 270,800	\$ 262,834	\$ 255,001	\$ 266,371

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>	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
SOURCES OF FUNDS				
Operating Revenues				
Sewer Service Charges	\$ 270,831	\$ 263,650	\$ 272,732	\$ 282,330
Industrial Waste Surcharge	6,370	5,626	5,118	5,886
Recovery of TCEQ Fees	480	495	586	623
Reduction for Affordability Program	(3,162)	(3,506)	(3,812)	(4,003)
Total Operating Revenues	274,519	266,265	274,624	284,836
Nonoperating Revenues	10,993	4,884	2,600	1,920
Build America Bonds Subsidy	1,441	769	809	809
Total Revenues	286,953	271,918	278,033	287,565
Capital Recovery Fees	31,827	38,050	31,612	31,611
Contributions in Aid of Construction	1,049	2,533	-	-
Draw on Equity	-	-	-	-
Total Sources of Funds	\$ 319,829	\$ 312,501	\$ 309,645	\$ 319,176
USES OF FUNDS				
Operations and Maintenance	\$ 113,874	\$ 115,817	\$ 116,442	\$ 124,314
Revenue Bond Debt Requirement	81,699	87,347	96,376	95,707
Other Debt Service Requirement	1,352	389	2,263	1,511
Transfer to the City of San Antonio	8,527	10,810	11,068	11,466
Balance Available for:				
Renewal and Replacement Fund (Restricted)	37,144	43,016	32,608	31,795
Renewal and Replacement Fund (Unrestricted)	77,233	55,122	50,888	54,383
Total Uses of Funds	\$ 319,829	\$ 312,501	\$ 309,645	\$ 319,176

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>	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
SOURCES OF FUNDS				
Operating Revenues				
Chilled Water Sales	\$ 10,615	\$ 9,894	\$ 10,415	\$ 10,500
Total Operating Revenues	10,615	9,894	10,415	10,500
Nonoperating Revenues	192	157	-	-
Build America Bonds Subsidy				
Total Revenues	10,807	10,051	10,415	10,500
Capital Recovery Fees	-	-	-	-
Draw on Equity	-	-	-	-
Total Sources of Funds	\$ 10,807	\$ 10,051	\$ 10,415	\$ 10,500
USES OF FUNDS				
Operations and Maintenance	\$ 8,788	\$ 7,468	\$ 7,019	\$ 7,333
Revenue Bond Debt Requirement	3,027	3,041	3,125	3,468
Other Debt Service Requirement	80	112	75	63
Transfer to the City of San Antonio	327	402	417	420
Balance Available for:				
Renewal and Replacement Fund (Restricted)	125	30	15	-
Renewal and Replacement Fund (Unrestricted)	(1,540)	(1,002)	(236)	(784)
Total Uses of Funds	\$ 10,807	\$ 10,051	\$ 10,415	\$ 10,500

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, 2021 and 2022, 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	\$ 3,147,798	\$ 75,675	\$ 64,662	\$ 16,324	\$ 259,712	\$ 494,708	\$ 4,058,879
Operating income						362,639	362,639
Depreciation & Amortization	(206,529)					(1,000)	(207,529)
Net non-operating income/(expense)			2,076	480		(121,421)	(118,865)
Capital Recovery Fees collected					100,075		100,075
Plant contributions	88,119						88,119
Transfer to Operating Reserve		2,686				(2,686)	-
Required debt service transfers	(8,753)		206,878	8,753		(206,878)	-
Projected debt service payments	86,604		(208,137)			121,533	-
Non-debt funding of capital improvements	181,598				(75,752)	(105,846)	-
Projected Net Position, end of year	\$ 3,288,837	\$ 78,361	\$ 65,479	\$ 25,557	\$ 284,035	\$ 541,049	\$ 4,283,318
% Change in Net Position	4.5%	3.5%	1.3%	56.6%	9.4%	9.4%	5.5%

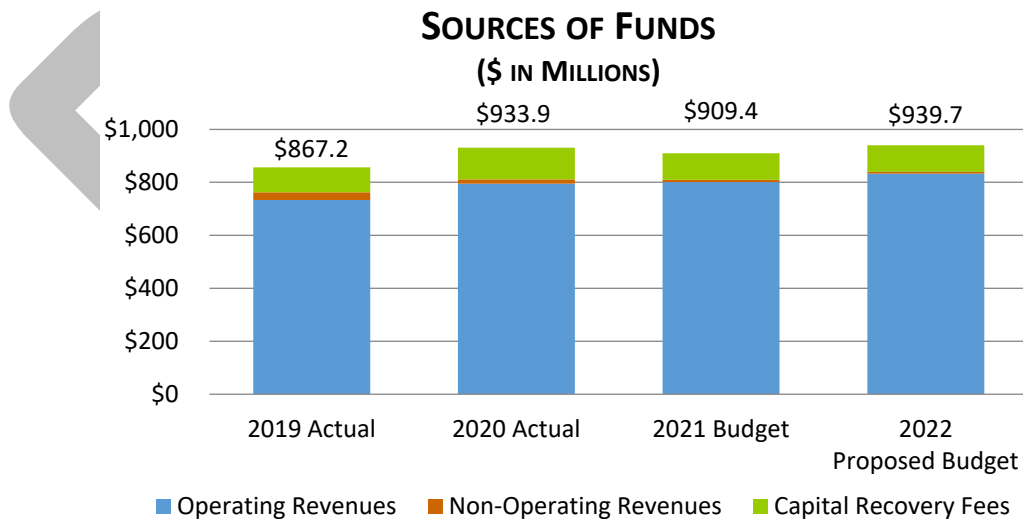
¹The Debt Service Reserve decrease expected in 2021 is due to the anticipated refunding of outstanding senior lien debt obligations with junior lien obligations, which will not require a Debt Service Reserve component.

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 2022 budgeted Sources of Funds for all core businesses.

<i>(dollars in thousands)</i>	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
SOURCES OF FUNDS				
Operating Revenues				
Sewer Service Charges	\$ 270,831	\$ 263,650	\$ 272,732	\$ 282,330
Metered Water Sales	234,470	228,350	227,553	239,483
Water Supply Fee	168,227	246,486	244,024	253,993
EAA Fee	23,421	23,165	23,731	22,773
Chilled Water Sales	10,615	9,894	10,415	10,500
Conservation	12,062	12,232	10,791	11,001
Industrial Waste Surcharge	6,370	5,626	5,118	5,886
Stormwater	4,828	3,554	5,235	5,728
Recycled Water System	6,050	6,518	6,413	6,694
Recovery of TCEQ Fees	2,223	2,377	2,548	2,610
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Total Operating Revenues	733,179	794,917	800,758	832,805
Nonoperating Revenues				
Build America Bonds Subsidy	25,451	14,298	6,500	4,800
	3,317	1,917	2,022	2,023
Total Revenues	761,947	811,132	809,280	839,628
Capital Recovery Fees				
Capital Recovery Fees	94,641	119,571	100,075	100,074
Contributions in Aid of Construction	9,259	3,205	-	-
Draw on Equity	1,400	-	-	-
Total Sources of Funds	\$ 867,247	\$ 933,908	\$ 909,355	\$ 939,702



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

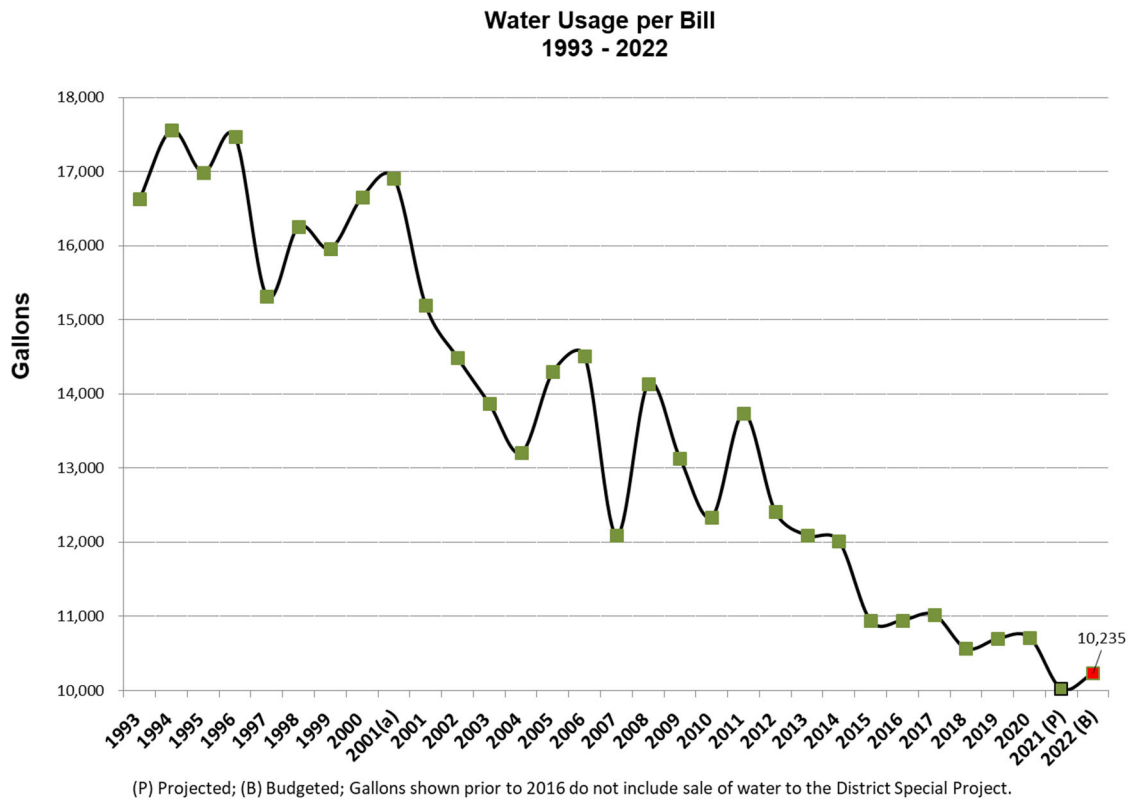
Through this systematic and comprehensive approach to forecasting metered revenues, SAWS has been able to identify developing shifts in usage patterns and underlying trends in customers' water usage. These customer connections and usage forecasts are aggregated to develop a comprehensive forecast for 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 2022.

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. While these trends have stabilized since the widespread availability of vaccines, usage is not expected to fully return to the pre-pandemic trend in 2022.

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.

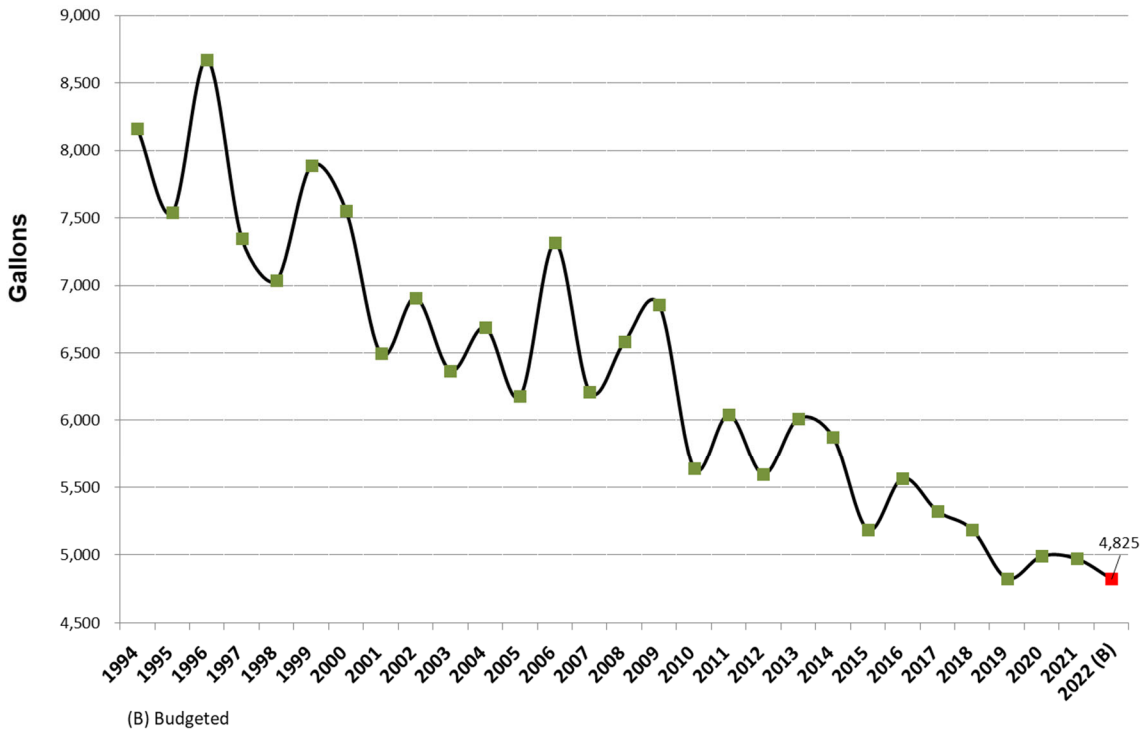
- The drought that began in 2011 lasted into 2015. The resulting drought restrictions during that period, brought customer usage levels in 2013 and 2014 to what was up until then historically low usage levels.
- Extremely wet weather conditions during 2015 served to end the drought but also dampened 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 drier conditions, to 10,699 in 2019 and 10,716 in 2020. This shows the continued trend of lower usage, as 2019 and 2020 were drier than 2017 but produced significantly lower usage per bill.
- Based on actual totals through July, the usage for 2021 is projected to be significantly lower than 2020, around 10,023 gallons, as use per bill continues to trend downward since rainfall has been above historical averages.

In order to minimize the financial risk of overestimating revenues, 2022 budgeted revenues assume average customer use per bill of 10,235 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 some negative economic impacts of COVID-19 continue but are significantly diminished in 2022. Consequently, the total budgeted water usage for 2022 is 67.2 billion gallons – 3.2% above the 65.1 billion gallons budgeted in 2021 and 2.0% above the 65.9 billion gallons 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, while the 2021 AWC was slightly above the trend at 4,973 gallons. Our projections attribute this to increased domestic winter demand associated with teleworking and remote school over the AWC calculation period. We expect this trend to abate in 2022, with AWC returning to prior trend at 4,825 gallons.

**Average Winter Consumption
1994 - 2022**



(B) Budgeted

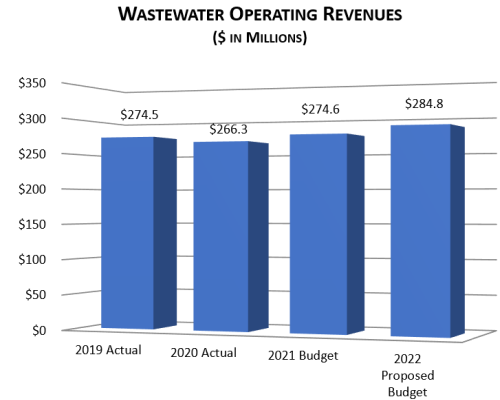
OPERATING REVENUES

The 2022 revenue budget does not include any adjustments in rates for 2022 with the exception of a proposed 10% rate increase for the Downtown and Port San Antonio Chilled Water Systems.

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.

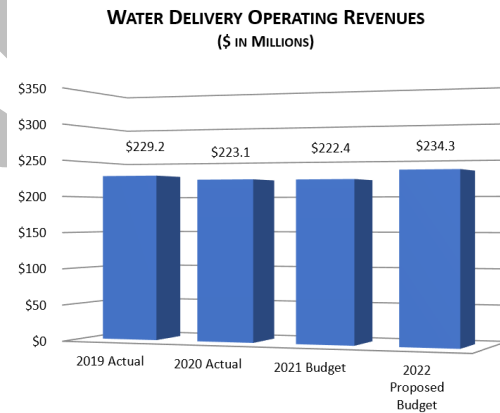
Wastewater operating revenues for 2022 are projected to consist primarily of \$282.3 million in sewer service charges and \$5.9 million in sewer surcharge revenues. Total metered wastewater revenues are forecasted to increase by 3.7% over the 2021 budget, which reflects strong growth in the number of residential customers, and a partial recovery in commercial and industrial class usage from the declines caused by the COVID-19 pandemic.



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 operating revenues are forecasted at \$234.3 million in 2022.

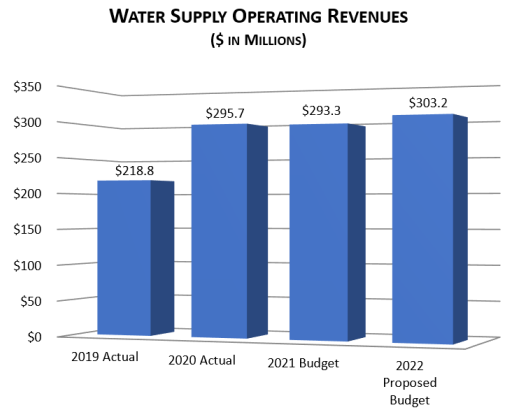
The 2022 revenue forecast assumes 2022 billed water usage of 67.2 billion gallons, which is 3.2% more than 2021 budgeted water usage. This increase reflects strong growth in the number of residential customers, and a partial recovery in commercial and industrial class usage from the declines caused by the COVID-19 pandemic.



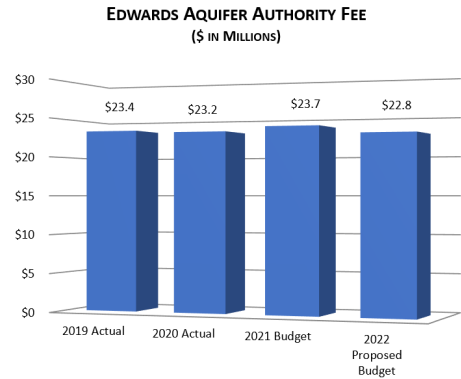
WATER SUPPLY OPERATING REVENUES

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 2022 are projected to be \$254 million, \$10 million more than projected in 2021, which reflects the same factors impacting water delivery revenues.

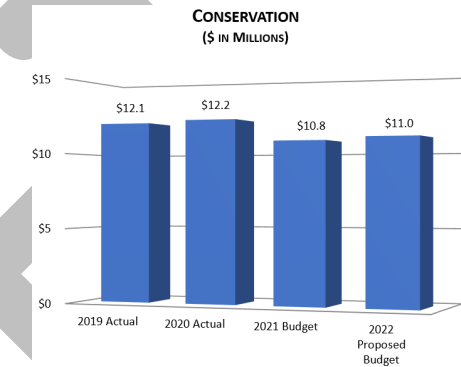


The Edwards Aquifer Authority (EAA) is statutorily empowered to impose an annual permit fee on all parties permitted to pump water from the Edwards Aquifer. The annual permit fee charged to SAWS is based on the number of acre-feet per year that SAWS is permitted to pump from the Edwards Aquifer and is recovered by SAWS through the assessment of a pass-through volumetric charge to its customers; the EAA Fee. The 2022 EAA Fee budgeted revenue is \$22.8 million.



Recycled water revenues are budgeted to be \$6.7 million in 2022. The forecasted receipt of \$3.7 million from the CPS Energy contract is projected to contribute 55.2% of recycled water revenues.

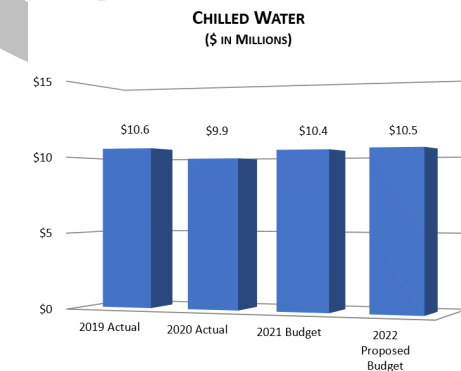
Conservation revenues are used to fund residential and commercial conservation programs. Conservation revenues for 2022 will be recovered from a portion of the residential water charges for monthly usage in excess of 7,481 gallons, a portion of non-residential monthly meter charges, and a portion of the irrigation revenues from all usage blocks. For 2022, conservation revenues are budgeted at \$11 million or 3.6% 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 \$5.7 million in 2022 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. This fall, SAWS is seeking City Council approval for a 10% increase in rates supporting the Downtown and Port San Antonio Chilled Water System as an interim step toward improving the financial condition of this system. Including this proposed rate adjustment, 2022 revenues are projected at \$10.5 million. Chilled water services comprise approximately 1.3% of total operating revenues.



NON-OPERATING REVENUE

2022 non-operating revenues, budgeted at \$6.8 million, are comprised of \$4.8 million in interest earnings on investments and a \$2 million federal subsidy to be received on previously issued Build America Bonds. Non-operating revenues account for 0.7% of the total sources of funds for 2022.

The average investment base is assumed to be \$1.2 billion and the yield on those investments is estimated to be 0.4% in 2022.

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 2022 reflects 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, the City Council allocated 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, the Council acknowledged the intention of SAWS to allow unclaimed fee waivers 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.

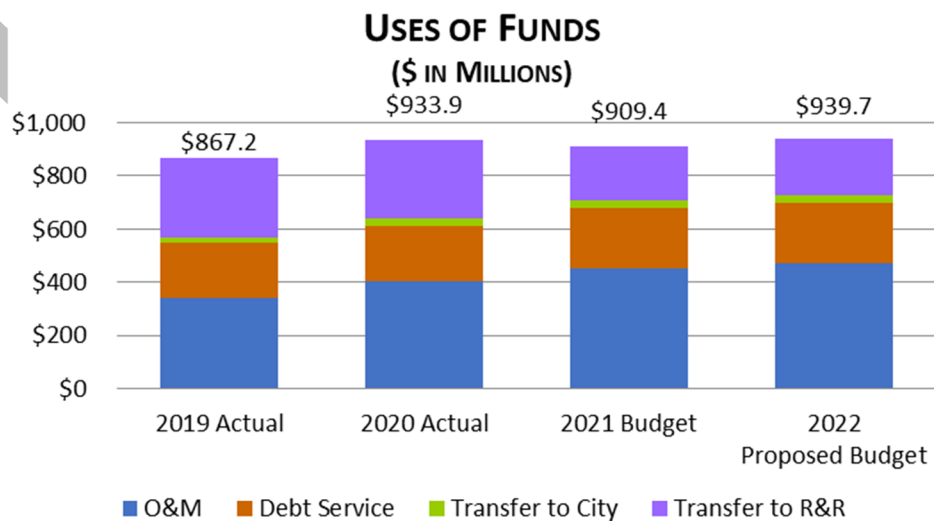
USES OF FUNDS

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:

- 1 • Operations & Maintenance
- 2 • Debt Service & Reserve Fund Requirements
- 3 • Transfer to the City
- 4 • Any Surplus Transferred to R&R (provides cash for current year debt coverage as well as funding for capital programs)

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

<i>(dollars in thousands)</i>	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
USES OF FUNDS				
Operations and Maintenance	\$ 339,934	\$ 401,961	\$ 454,048	\$ 470,166
Revenue Bond Debt Requirement	202,211	205,432	218,422	223,911
Other Debt Service Requirement	4,879	3,379	4,932	3,385
Transfer to the City of San Antonio	21,918	31,043	30,931	32,206
Balance Available for:				
Renewal and Replacement Fund (Restricted)	110,001	138,280	102,779	101,465
Renewal and Replacement Fund (Unrestricted)	188,304	153,813	98,243	108,569
Total Uses of Funds	\$ 867,247	\$ 933,908	\$ 909,355	\$ 939,702



OPERATIONS AND MAINTENANCE EXPENSE

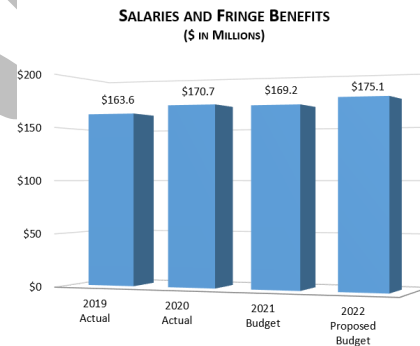
The cost to operate and maintain the system on a daily basis comprises the largest single use of SAWS' revenues. Approximately 50% of SAWS operating revenues are dedicated to supporting ongoing operations and maintenance. The 2022 budget for Operations and Maintenance (O&M) after capitalized costs is \$470.2 million, which is an increase of 3.5% from the 2021 budget.

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.

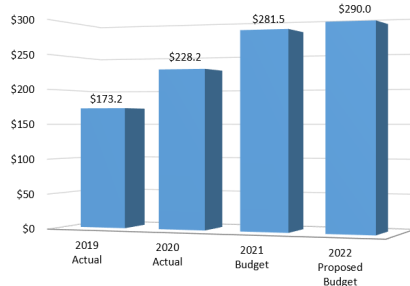
(\$ in thousands)	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 163,647	\$ 170,743	\$ 169,198	\$ 175,093
Contractual Services	173,187	228,200	281,488	289,985
Materials and Supplies	26,469	25,836	25,348	27,274
Other Charges	7,374	7,103	9,934	9,914
O&M Before Capitalized Cost Total	\$ 370,677	\$ 431,882	\$ 485,968	\$ 502,266
Capitalized Cost	(30,743)	(29,921)	(31,920)	(32,100)
Total O&M	\$ 339,934	\$ 401,961	\$ 454,048	\$ 470,166
Capital Outlay	\$ 9,536	\$ 14,143	\$ 9,786	\$ 11,846

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 2022 are estimated at \$175.1 million, or 34.9% of gross operation and maintenance expenditures (before capitalization) and reflect a 3.5% increase from prior year budget. The increased salary and fringe benefits are the result of projected additional medical insurance costs and performance pay increases budgeted for 2022.



CONTRACTUAL SERVICES (\$ in Millions)



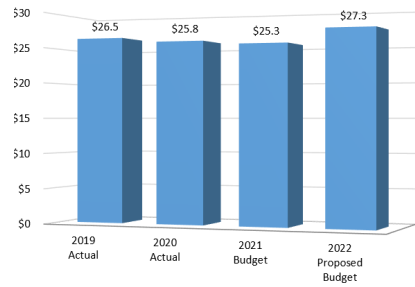
CONTRACTUAL SERVICES

Contractual Services expenditures represent operating services that are obtained through express or implied contracts. Total Contractual Services for 2022 are budgeted at \$290 million, which is 57.7% of the gross operation and maintenance expenditures (before capitalization) and reflect a net increase of \$8.5 million (3%) over the 2021 budget. The primary drivers of this projected increase are forecasted increases in maintenance expenditures at SAWS primary wastewater treatment facility as well as additional cybersecurity and other information technology improvements.

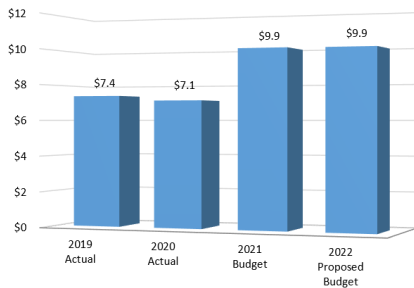
MATERIALS AND SUPPLIES

The Materials and Supplies budget of \$27.3 million is 7.5% of gross operation and maintenance expenditures and reflects an increase of 5.4% compared to the 2021 budget. The projected change is due in large part to increased spending on safety materials and supplies as SAWS anticipates a return to the office for many of its administrative personnel combined with an increase in the fuel prices since the development of the 2021 budget.

MATERIALS AND SUPPLIES
(\$ IN MILLIONS)



OTHER CHARGES
(\$ IN MILLIONS)



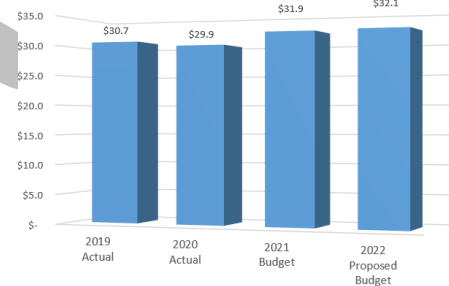
OTHER CHARGES

The Other Charges category includes property, casualty and workers' compensation costs, retirees' healthcare costs, and bank charges. The 2022 costs are estimated at \$9.9 million, or 2.0% of gross operation and maintenance expenditures, and reflect a slight 0.2% decrease from the 2021 budget.

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 2022, Capitalized Costs are estimated at \$32.1 million, or 6.4% of gross operation and maintenance expenditures, which is largely in line with the prior year.

CAPITALIZED COSTS
(\$ IN MILLIONS)



OPERATION AND MAINTENANCE SUMMARY BY EXPENSE CLASSIFICATION

(\$ in thousands)	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Salaries and Fringe Benefits				
511100 Salaries	104,445	109,596	110,427	115,437
511140 Overtime Pay	7,910	6,513	5,888	6,525
511150 On-Call Pay	787	817	727	765
511160 Employee Insurance	17,327	19,082	18,959	21,183
511162 Retirement	22,900	23,102	23,126	22,913
511164 Unused Sick Leave Buyback	20	25	70	70
511166 Personal Leave Buyback	976	1,194	950	950
511168 Accrued Vacation leave	1,682	2,914	1,500	2,000
511170 Incentive Pay	100	-	51	150
511175 Other Post Employment Benefits	7,500	7,500	7,500	5,100
Salaries and Fringe Benefits Total	163,647	170,743	169,198	175,093
Contractual Services				
511210 Operating Expense	1,637	1,451	1,596	1,436
511211 Rental of Facilities	194	263	246	246
511212 Alarm and Security	2,141	1,758	2,189	2,189
511214 Uniforms and Shoe Allowance	379	339	445	451
511215 Box Lunch Program	-	415	-	-
511216 Catering Svcs and Luncheons	133	60	87	119
511218 Project Agua Assistance	393	390	400	400
511219 Program Rebates	3,098	3,073	3,519	3,625
511220 Maintenance Expense	20,912	20,647	20,539	26,042
511221 Street Cut Permit Admin Fee	686	535	841	841
511222 St Pave/Repair Fee	1,319	797	1,801	1,801
511224 Auto and Equip. Maintenance Parts	1,972	2,026	1,563	1,563
511225 Damage Repair	108	170	125	125
511230 Equipment Rental Charges	1,776	1,160	394	433
511240 Travel	214	25	58	207
511245 Training	721	253	518	518
511247 Conferences	42	20	36	108
511250 Memberships and Subscriptions	509	405	370	509
511260 Utilities	28,284	32,975	40,842	42,105
511261 Water Options	45,765	96,617	134,918	135,496
511265 Ground Water District Pay	23,615	23,120	24,255	23,297
511270 Mail and Parcel Post	2,075	2,033	2,238	2,513
511280 Telemetry Charges	2	2	3	2
511310 Educational Assistance	100	77	77	77
511312 Contractual Prof Svcs	23,011	25,888	28,689	28,432
511313 Inspect and Assessment Fees	2,178	2,295	2,496	2,525
511315 Temporary Employees	1,482	1,092	607	593
511316 Medical Services	-	107	136	136
511317 Medical Testing	-	201	-	-
511320 Legal Services	1,793	1,389	2,264	1,971
511370 Communications	1,473	1,382	1,549	1,549
511381 Software and Hardware Maintenance	7,175	7,235	8,687	10,676
Contractual Services Total	173,187	228,200	281,488	289,985

OPERATION AND MAINTENANCE SUMMARY BY EXPENSE CLASSIFICATION (continued)

(\$ in thousands)	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Materials and Supplies				
511410 Small Tools	802	747	704	764
511417 Copy and Printing Expense	14	9	17	242
511420 Operating Materials	2,310	2,016	2,337	2,476
511421 Heating Fuel	34	18	15	15
511422 Chemicals	7,477	9,343	9,705	9,387
511425 Education of School Children	14	6	20	30
511426 Public Awareness-WQEE	-	-	-	1
511427 Enforcement	-	-	-	5
511430 Maintenance Materials	11,429	9,736	9,335	9,940
511435 Safety Materials and Supplies-COVID	-	156	-	-
511440 Safety Materials and Supplies	1,086	1,356	872	1,542
511441 Inventory Variances	31	(87)	-	-
511450 Tires and Tubes	623	662	550	550
511451 Motor Fuel and Lubricants	2,649	1,874	1,793	2,322
Materials and Supplies Total	26,469	25,836	25,348	27,274
Other Charges				
511510 Judgements and Claims	(1,006)	(325)	650	650
511511 AL/GL Claims - Cont. Liab.	326	(577)	330	330
511520 Bank Charges	20	91	124	448
511525 Cash Short/(Over)	-	-	-	-
511530 Employee Relations	163	119	156	188
511540 Retiree Insurance	6,003	6,004	6,324	5,578
511570 Casualty Insurance	993	1,189	1,140	1,640
511580 Unemployment Compensation	62	73	80	80
511590 Workers Comp Medical	813	529	1,130	1,000
Other Charges Total	7,374	7,103	9,934	9,914
O&M Before Capitalized Costs	370,677	431,882	485,968	502,266
Capitalized Costs	(30,743)	(29,921)	(31,920)	(32,100)
	-	-	-	-
Grand Total	\$ 339,934	\$ 401,961	\$ 454,048	\$ 470,166

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 2022 debt service schedules assume the issuance of an additional \$345.8million of bonds in 2022 to provide funds for the 2022 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 2022 on existing and new bonded debt is projected to be \$223.9 million, which is 2.5% more than the 2021 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 \$ 3.4 million in debt related expenses in 2022. 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. \$32.2 million has been budgeted for this transfer, which is \$1.3 million higher than the \$30.9million budgeted in 2021.

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, \$210.0 million is estimated to be available for transfer to the Renewal and Replacement Fund (R&R) of which \$101.5 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 2022 consists of \$11.8 million in planned capital expenditures meeting the above criteria.

The following table includes actual expenditures for 2019 and 2020, budgeted expenditures for 2021, and planned expenditures in 2022 for the capital outlay program:

(\$ in thousands)	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Automobiles and Trucks	\$ 4,960	\$ 4,536	\$ 3,170	\$ 4,946
Computer Equipment	1,687	1,993	2,103	2,102
Heavy Equipment	419	1,276	2,347	2,347
Lab Equipment	90	199	200	200
Land, Land Rights & Water Permits	204	9	-	-
Machinery and Equipment	-	-	250	250
Miscellaneous Equipment	535	5,195	1,681	1,753
Pumping Equipment	951	258	-	200
Software Systems	197	652	35	48
Structures and Improvements	493	25	-	-
Total	\$ 9,536	\$ 14,143	\$ 9,786	\$ 11,846

After funding \$11.8 million for 2022 capital outlay expenditures, \$96.7 million in unrestricted funds is expected to be added to the R&R Fund in 2022. 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, 2021, SAWS will have Senior and Junior Lien Water System Revenue Bonds outstanding, as follows:

- Senior Lien Water System Fixed-Rate Revenue Bonds** - comprised of Series 2009B, Series 2010B, Series 2012, and Series 2012A outstanding in the amount of \$280,565,000 as of December 31, 2021 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 Fixed-Rate Revenue Bonds** - comprised of 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, Series 2020C (NO RESERVE FUND), Series 2020D, and Series 2021A (NO RESERVE FUND) outstanding in the amount of \$2,262,805,000 as of December 31, 2021 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, 2021 is expected to be \$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.

INTEREST RATE HEDGE AGREEMENT (SWAP)

- 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, 2021, \$68,820,000 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 2022 budgeted debt service requirements of SAWS at the original principal amortization of the Subordinate Lien Obligations. Principal amortization calls for \$4,435,000 of the commercial paper notes associated with the Subordinate Lien Obligations be redeemed on May 1, 2022, bringing the outstanding balance to \$64,385,000.

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 2022 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 5, 2024. Capacity under the Series C Agreement is currently fully consumed by a direct placement note with Wells Fargo with a maturity date of July 1, 2022. 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 2022 Budget assumes approximately \$403 million of commercial paper is outstanding relating to the funding of capital improvement projects by the end of 2022. As stated in the "Interest Rate Hedge Agreement (Swap)" section herein, by the end of 2022, an additional \$64.4 million of the commercial paper program will be attributable to the redemption of the Subordinate Lien Obligations. The 2022 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 June 2021, 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
Fitch Ratings	AA+	AA	F1+
Moody's Investors Service, Inc.	Aa1	Aa2	P-1
S&P Global Ratings	AA+	AA	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 2022 Operating Budget projects an estimated 2022 Senior Lien Debt Coverage ratio of 9.19 times and 2022 Total Debt Coverage ratio of 1.63 times.

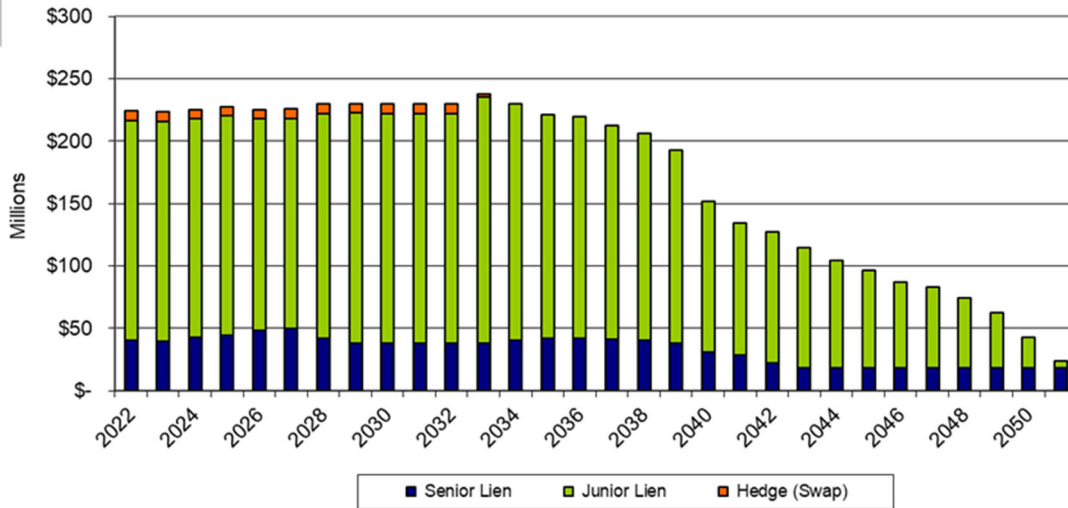
DEBT COVERAGE CALCULATION	
<i>(\$ in thousands)</i>	
Total Sources of Funds	\$ 939,702
Less Revenues from:	
CPS Energy Contract	3,709
Capital Recovery Fees	100,074
Transfer from Renewal & Replacement Fund	-
Interest on Project Funds	240
	<hr/>
Gross Revenues as defined by Ordinance No. 75686	\$ 835,679
Less: Operations & Maintenance	470,166
	<hr/>
Pledged Revenues as defined by Ordinance No. 75686	\$ 365,513
2022 Senior Lien Debt Service Requirement	\$ 39,753
2022 Senior Lien Debt Coverage Ratio	<u>9.19 x</u>
Maximum Senior Lien Debt Service Requirement (Year 2027)	\$ 49,608
Maximum Senior Lien Debt Coverage Ratio	<u>7.37 x</u>
2022 Total Debt Service Requirement	\$ 224,918
2021 Total Debt Coverage Ratio	<u>1.63 x</u>
Maximum Total Debt Service Requirement (Year 2033)	\$ 238,023
Maximum Total Debt Coverage Ratio	<u>1.54 x</u>

BUDGETED REVENUE AND REFUNDING BONDS DEBT SERVICE SCHEDULES

Fiscal Year December 31.	Senior Lien	Junior Lien	Total Bonded Debt Service	Interest Rate Hedge (Swap)	Total Debt Service
2022	\$ 39,752,585	\$ 176,832,634	\$ 216,585,219	\$ 7,324,754	\$ 223,909,973
2023	39,755,633	176,025,353	215,780,986	7,341,992	223,122,977
2024	42,181,837	175,529,907	217,711,744	7,358,854	225,070,598
2025	44,170,993	176,150,487	220,321,480	7,379,994	227,701,474
2026	48,334,109	169,662,890	217,996,998	7,396,519	225,393,517
2027	49,602,872	168,652,058	218,254,929	7,416,555	225,671,484
2028	41,618,210	180,460,380	222,078,590	7,439,543	229,518,134
2029	37,727,547	184,912,614	222,640,161	7,461,594	230,101,755
2030	37,653,721	184,509,929	222,163,650	7,485,623	229,649,273
2031	37,554,219	184,600,780	222,154,999	7,509,405	229,664,404
2032	37,464,674	184,473,285	221,937,958	7,534,120	229,472,079
2033	37,382,746	198,122,076	235,504,822	2,514,211	238,019,033
2034	40,316,535	189,449,368	229,765,902	-	229,765,902
2035	41,683,172	179,283,926	220,967,098	-	220,967,098
2036	41,503,936	178,025,441	219,529,376	-	219,529,376
2037	41,314,029	170,822,645	212,136,674	-	212,136,674
2038	40,135,679	165,693,662	205,829,342	-	205,829,342
2039	37,683,624	154,673,592	192,357,217	-	192,357,217
2040	30,633,664	120,636,391	151,270,055	-	151,270,055
2041	28,667,870	105,588,032	134,255,901	-	134,255,901
2042	21,823,112	104,847,491	126,670,602	-	126,670,602
2043	18,389,725	96,353,031	114,742,756	-	114,742,756
2044	18,388,138	85,812,849	104,200,986	-	104,200,986
2045	18,379,400	77,568,620	95,948,020	-	95,948,020
2046	18,387,725	68,066,701	86,454,426	-	86,454,426
2047	18,382,413	64,596,348	82,978,760	-	82,978,760
2048	18,382,938	55,697,120	74,080,057	-	74,080,057
2049	18,393,338	43,501,157	61,894,495	-	61,894,495
2050	18,388,000	24,248,676	42,636,676	-	42,636,676
2051	18,391,313	5,521,083	23,912,396	-	23,912,396
	<u>\$ 982,443,751</u>	<u>\$ 4,050,318,526</u>	<u>\$ 5,032,762,278</u>	<u>\$ 84,163,164</u>	<u>\$ 5,116,925,442</u>

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

Total Senior Lien, Junior Lien, and Interest Rate Hedge Debt Service



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ORGANIZATION AND STAFFING

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ORGANIZATION AND STAFFING

OPERATIONS AND MAINTENANCE SUMMARY BY DEPARTMENT

(\$ in thousands)	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Board of Trustees and Pres/CEO				
Office of the President-CEO	\$ 1,189	\$ 1,140	\$ 1,151	\$ 1,263
Board of Trustees	58	52	63	64
Board of Trustees Support	270	280	313	343
Continuous Improvement and Innovation	478	449	496	436
Internal Audit	580	609	692	716
Board of Trustees and Pres/CEO Total	2,575	2,530	2,715	2,822
Communications and External Affairs				
Communications Administration	593	541	565	579
Communications	1,459	1,481	1,637	1,701
Conservation Department	5,171	5,306	5,800	5,934
External Relations	2,178	2,201	2,309	2,343
Communications and External Affairs Total	9,401	9,529	10,311	10,557
Customer Experience and Strategic Initiatives				
Customer Service Administration	416	500	500	517
Advanced Metering Infra. (AMI)	225	268	397	3,021
Billing and Customer Care	7,029	7,192	7,553	8,227
Emergency Operations Center	1,467	1,493	1,506	1,509
Field Operations	10,187	10,559	10,505	10,455
Performance Analysis and Training	776	796	878	857
Customer Experience and Strategic Initiatives Total	20,100	20,808	21,339	24,586
Distribution and Collection				
Office of the VP - Distribution and Collection	1,024	1,160	1,295	1,455
Construction and Maintenance	21,451	18,351	18,437	19,302
Distr and Collection Support	4,210	6,598	7,984	8,572
Eastern Service Centers	11,025	11,517	11,078	11,234
Western Service Centers	10,762	10,301	9,899	10,027
Distribution and Collection Total	48,472	47,927	48,693	50,590
Engineering and Construction				
Office of the VP - Engineering and Construction	1,236	1,086	1,153	501
Asset Management	840	1,631	1,432	1,977
Central Water Integration Pipeline Project	619	257	356	-
Construction	6,419	6,862	7,060	6,839
Development	3,777	3,837	5,386	4,008
Pipelines	3,984	4,430	4,444	4,343
Plants and Major Projects	1,775	1,983	2,090	2,288
Project Controls	-	-	-	795
Tank Maintenance	3,252	4,751	4,286	4,286
Engineering and Construction Total	21,902	24,837	26,207	25,037
Financial Services				
Office of the CFO	467	494	459	457
Accounting and Business Planning	3,034	3,159	3,016	3,269
Purchasing and Supply	2,097	1,901	2,004	2,070
Treasury	882	987	1,166	1,188
Financial Services Total	6,480	6,541	6,645	6,984
Human Resources				
Human Resources	4,725	4,445	4,660	4,832
Risk Management	2,814	2,510	2,375	2,893
Safety and Environmental Health	-	860	916	925
Human Resources Total	7,539	7,815	7,951	8,650

OPERATIONS AND MAINTENANCE SUMMARY BY DEPARTMENT (CONTINUED)

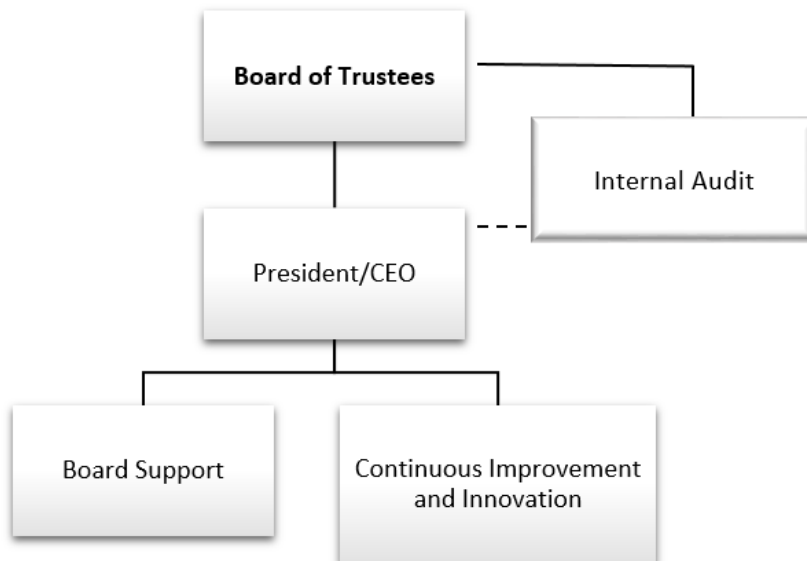
(\$ in thousands)	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Information Systems				
Office of the CIO	1,518	1,472	2,042	2,126
Enterprise Solutions	7,858	8,095	9,271	9,790
IT Infrastructure & Operations	7,597	7,823	8,612	9,674
Shared Services	6,492	6,466	7,794	7,263
Information Systems Total	23,465	23,856	27,719	28,853
Legal				
Contracting	1,500	1,571	1,792	1,571
Corporate Real Estate	590	583	685	689
Legal Department	4,164	4,013	4,858	4,506
Legal Total	6,254	6,167	7,335	6,766
Operations				
Ofc of Chief Operating Officer	1,176	1,460	988	762
Sr. VP Engineering and Construction	28	96	-	-
Operations Total	1,204	1,556	988	762
Operations Support				
Fleet and Facilities	25,461	23,331	22,918	23,357
Security	3,641	4,245	3,828	3,815
Operations Support Total	29,102	27,576	26,746	27,172
Production and Treatment				
Office of the VP - Production and Treatment	497	599	530	601
Ofc of Director - Production and Treatment Operati	81	76	66	83
Production	32,993	35,462	38,638	40,465
Treatment Maintenance Management	17,696	17,842	15,691	22,611
Treatment Operations Management	22,462	23,827	22,439	25,020
Production and Treatment Total	73,729	77,806	77,364	88,780
Sewer System Improvements				
Capacity Assessment	1,285	1,096	1,010	1,260
Capacity Mgt O&M (CMOM)	1,953	2,403	4,284	3,748
Program Administration	3,647	2,720	2,676	2,463
Structram Sewer Assessment	2,401	3,559	2,910	2,610
Sewer System Improvements Total	9,286	9,778	10,880	10,081
Water Resources and Governmental Relations				
Environmental Laboratory Services	2,396	2,563	2,630	2,617
Governmental Relations	1,800	1,699	1,356	1,201
Resource Protection & Compliance	8,357	8,256	8,628	8,660
Water Resources	71,262	125,856	171,313	168,484
Water Resources and Governmental Relations Total	83,815	138,374	183,927	180,962
Other Requirements	27,353	26,782	27,148	29,664
O&M Before Capitalized Cost Total	370,677	431,882	485,968	502,266
Capitalized Cost	(30,743)	(29,921)	(31,920)	(32,100)
Grand Total	\$ 339,934	\$ 401,961	\$ 454,048	\$ 470,166

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, the Internal Audit function and the Continuous Improvement and Innovation 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, maximize budgetary resources, promote efficiencies, enhance customer service and implement innovative management practices.



BOARD OF TRUSTEES AND PRESIDENT/CEO

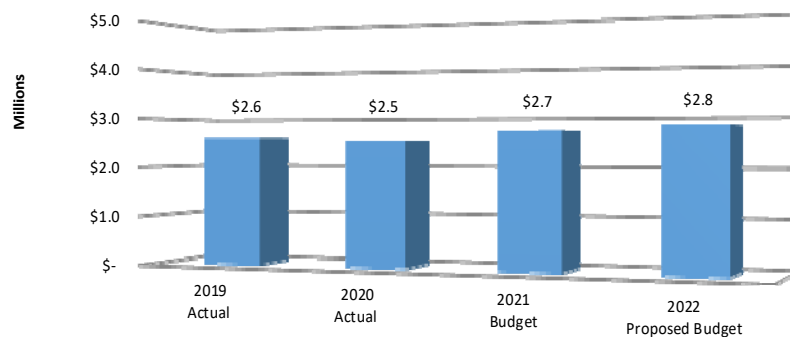
(\$ in thousands)

Expenditures by Type	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 2,440	\$ 2,393	\$ 2,450	\$ 2,572
Contractual Services	128	132	257	241
Materials and Supplies	7	5	8	9
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 2,575	\$ 2,530	\$ 2,715	\$ 2,822
Capitalized Cost	-	-	-	-
Total O&M	\$ 2,575	\$ 2,530	\$ 2,715	\$ 2,822
Capital Outlay	\$ -	\$ -	\$ -	\$ -

Expenditures by Department	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Office of the President-CEO	\$ 1,189	\$ 1,140	\$ 1,151	\$ 1,263
Board of Trustees	58	52	63	64
Board of Trustees Support	270	280	313	343
Continuous Improvement and Innovation	478	449	496	436
Internal Audit	580	609	692	716
O&M Before Capitalized Cost Total	\$ 2,575	\$ 2,530	\$ 2,715	\$ 2,822
Capitalized Cost	-	-	-	-
Grand Total	\$ 2,575	\$ 2,530	\$ 2,715	\$ 2,822

Full-Time Equivalent Positions	2019 Actual	2020 Actual	2021 Budget	2022 Proposed 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	4.5	4.5	4.0	4.0
Internal Audit	4.0	5.0	5.0	5.0
Total Full-Time Equivalent Positions	13.5	14.5	14.0	14.0

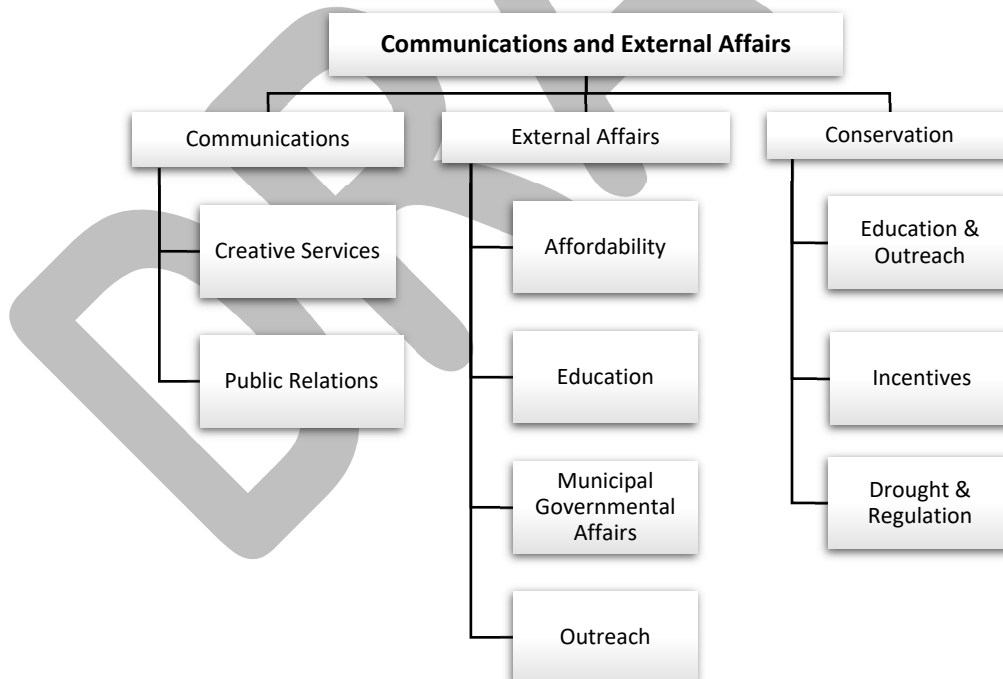
BOARD OF TRUSTEES AND PRESIDENT/CEO



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

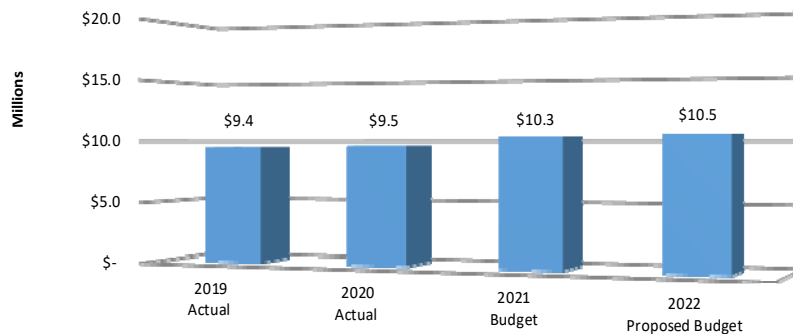
(\$ in thousands)

Expenditures by Type	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 4,323	\$ 4,628	\$ 4,822	\$ 4,859
Contractual Services	5,030	4,893	5,437	5,630
Materials and Supplies	47	8	37	53
Other Charges	1	-	15	15
O&M Before Capitalized Cost Total	\$ 9,401	\$ 9,529	\$ 10,311	\$ 10,557
Capitalized Cost	-	-	-	(28)
Total O&M	\$ 9,401	\$ 9,529	\$ 10,311	\$ 10,529
Capital Outlay	\$ 1	\$ -	\$ -	\$ -

Expenditures by Department	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Communications Administration	\$ 593	\$ 541	\$ 565	\$ 579
Communications	1,459	1,481	1,637	1,701
Conservation Department	5,171	5,306	5,800	5,934
External Relations	2,178	2,201	2,309	2,343
O&M Before Capitalized Cost Total	\$ 9,401	\$ 9,529	\$ 10,311	\$ 10,557
Capitalized Cost	-	-	-	(28)
Grand Total	\$ 9,401	\$ 9,529	\$ 10,311	\$ 10,529

Full-Time Equivalent Positions	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Communications Administration	4.0	4.0	4.0	4.0
Communications	9.5	9.5	9.5	9.5
Conservation Department	24.0	24.0	24.0	24.0
External Relations	12.0	14.0	14.0	14.5
Total Full-Time Equivalent Positions	49.5	51.5	51.5	52.0

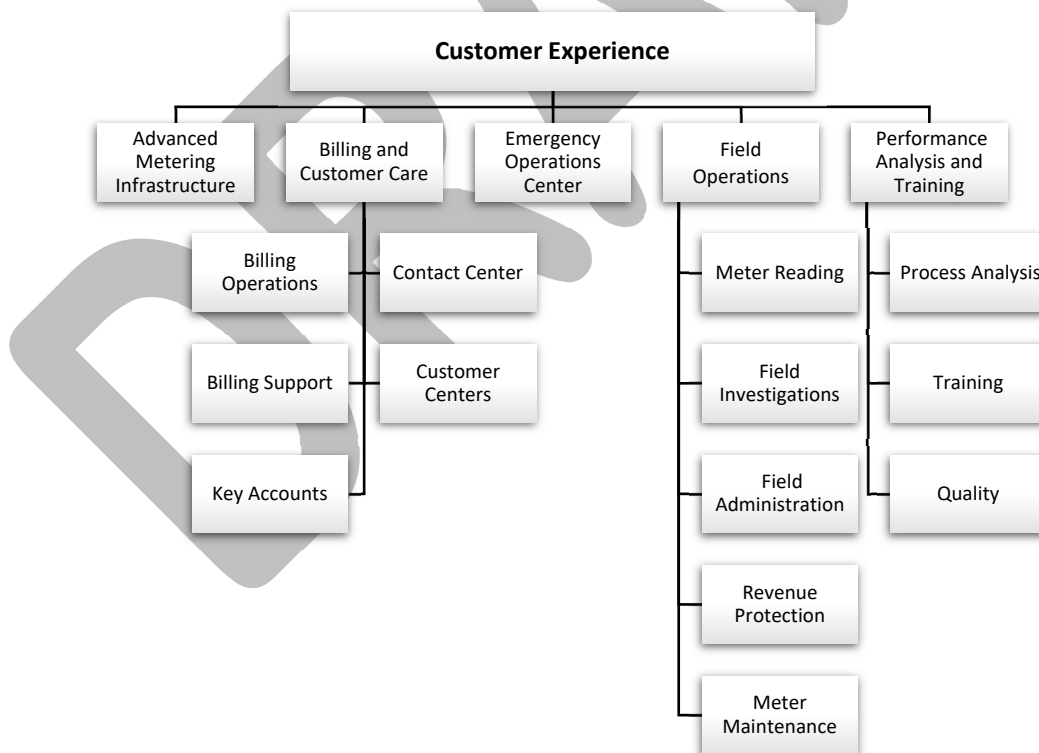
COMMUNICATIONS AND EXTERNAL RELATIONS



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 designing and executing the program to install electronic meters across SAWS service area. Upon completion of 2021 pilot, full deployment of electronic meters is planned to begin in 2022 and take approximately four years to complete.
- **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

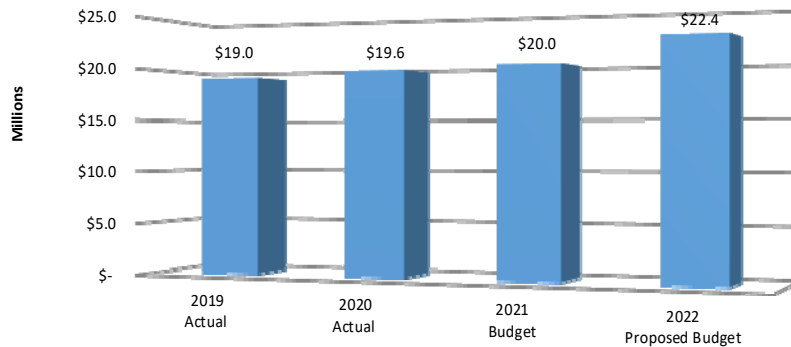
(\$ in thousands)

Expenditures by Type	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 16,897	\$ 17,810	\$ 18,583	\$ 19,979
Contractual Services	2,406	2,269	1,956	3,581
Materials and Supplies	794	725	798	1,023
Other Charges	3	4	2	3
O&M Before Capitalized Cost Total	\$ 20,100	\$ 20,808	\$ 21,339	\$ 24,586
Capitalized Cost	(1,112)	(1,246)	(1,375)	(2,233)
Total O&M	\$ 18,988	\$ 19,562	\$ 19,964	\$ 22,353
Capital Outlay	\$ -	\$ 255	\$ -	\$ 240

Expenditures by Department	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Customer Service Administration	\$ 416	\$ 500	\$ 500	\$ 517
Advanced Metering Infra. (AMI)	225	268	397	3,021
Billing and Customer Care	7,029	7,192	7,553	8,227
Emergency Operations Center	1,467	1,493	1,506	1,509
Field Operations	10,187	10,559	10,505	10,455
Performance Analysis and Training	776	796	878	857
O&M Before Capitalized Cost Total	\$ 20,100	\$ 20,808	\$ 21,339	\$ 24,586
Capitalized Cost	(1,112)	(1,246)	(1,375)	(2,233)
Grand Total	\$ 18,988	\$ 19,562	\$ 19,964	\$ 22,353

Full-Time Equivalent Positions	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Customer Service Administration	4.0	3.0	3.0	3.0
Advanced Metering Infra. (AMI)	2.0	3.0	3.0	15.0
Billing and Customer Care	139.5	142.0	149.5	162.0
Emergency Operations Center	22.0	22.0	22.0	22.0
Field Operations	137.0	139.0	140.0	139.0
Performance Analysis and Training	12.0	12.0	12.0	12.0
Total Full-Time Equivalent Positions	316.5	321.0	329.5	353.0

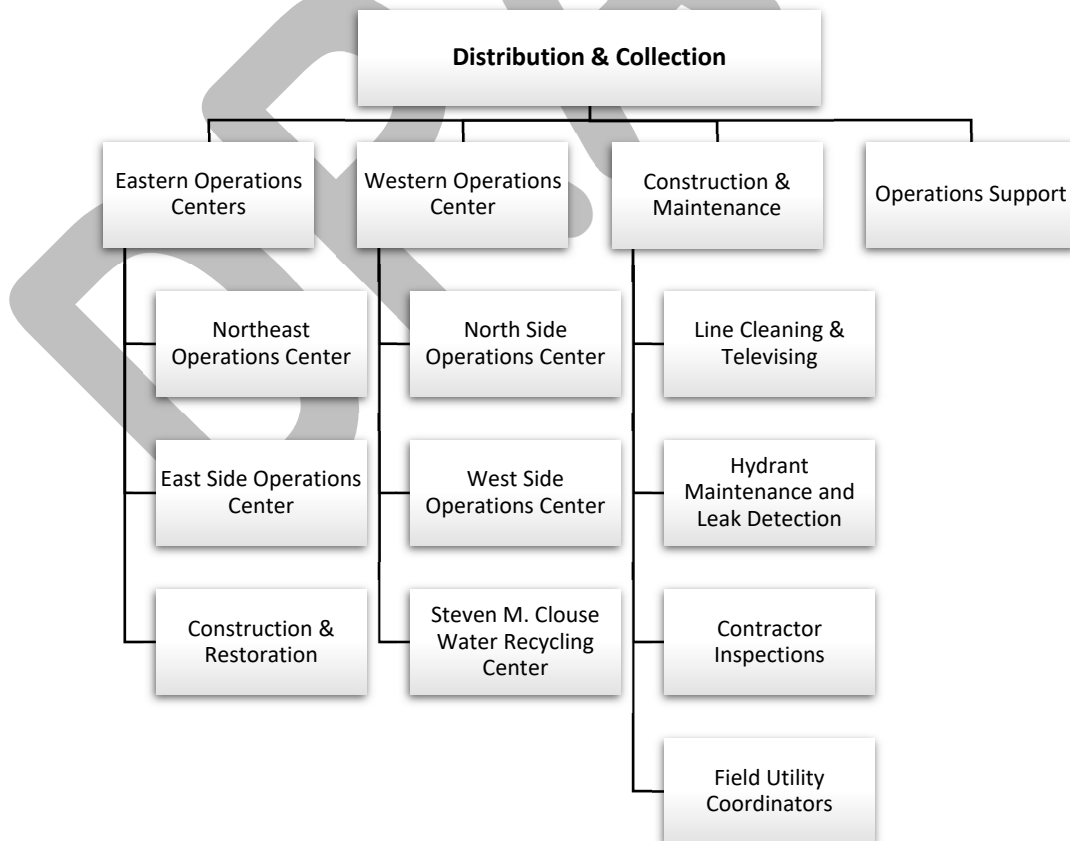
CUSTOMER EXPERIENCE



DISTRIBUTION AND COLLECTION

The Distribution and Collection Group operates, maintains and repairs over 13,000 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. Hydrant Maintenance and Leak Detection 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. Field Utility Coordinators also perform emergency and routine field investigations including utility locate services and oversees proactive manhole inspections.
- 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.



DISTRIBUTION AND COLLECTION

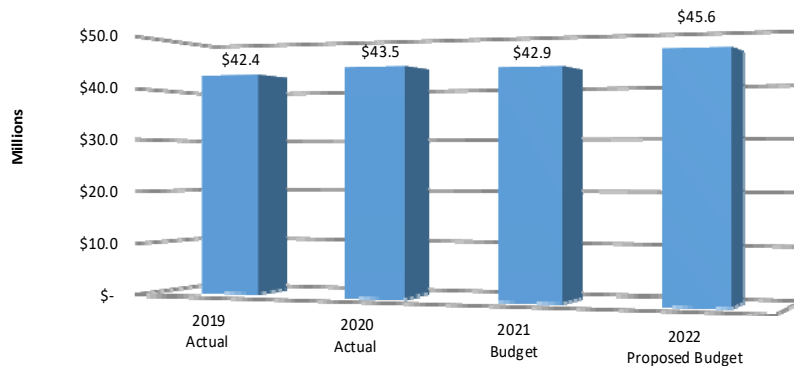
(\$ in thousands)

Expenditures by Type	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 32,238	\$ 32,692	\$ 31,731	\$ 32,282
Contractual Services	10,271	8,775	10,980	11,676
Materials and Supplies	5,963	6,460	5,982	6,632
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 48,472	\$ 47,927	\$ 48,693	\$ 50,590
Capitalized Cost	(6,030)	(4,381)	(5,770)	(5,023)
Total O&M	\$ 42,442	\$ 43,546	\$ 42,923	\$ 45,567
Capital Outlay	\$ 179	\$ 1,108	\$ 340	\$ 125

Expenditures by Department	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Office of the VP - Distribution and Collection	\$ 1,024	\$ 1,160	\$ 1,295	\$ 1,455
Construction and Maintenance	21,451	18,351	18,437	19,302
Distr and Collection Support	4,210	6,598	7,984	8,572
Eastern Service Centers	11,025	11,517	11,078	11,234
Western Service Centers	10,762	10,301	9,899	10,027
O&M Before Capitalized Cost Total	\$ 48,472	\$ 47,927	\$ 48,693	\$ 50,590
Capitalized Cost	(6,030)	(4,381)	(5,770)	(5,023)
Grand Total	\$ 42,442	\$ 43,546	\$ 42,923	\$ 45,567

Full-Time Equivalent Positions	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Office of the VP - Distribution and Collection	7.0	8.5	8.5	9.5
Construction and Maintenance	168.0	168.0	169.0	169.0
Distr and Collection Support	48.0	49.0	48.0	49.0
Eastern Service Centers	129.0	130.0	130.0	130.0
Western Service Centers	127.0	128.0	128.0	128.0
Total Full-Time Equivalent Positions	479.0	483.5	483.5	485.5

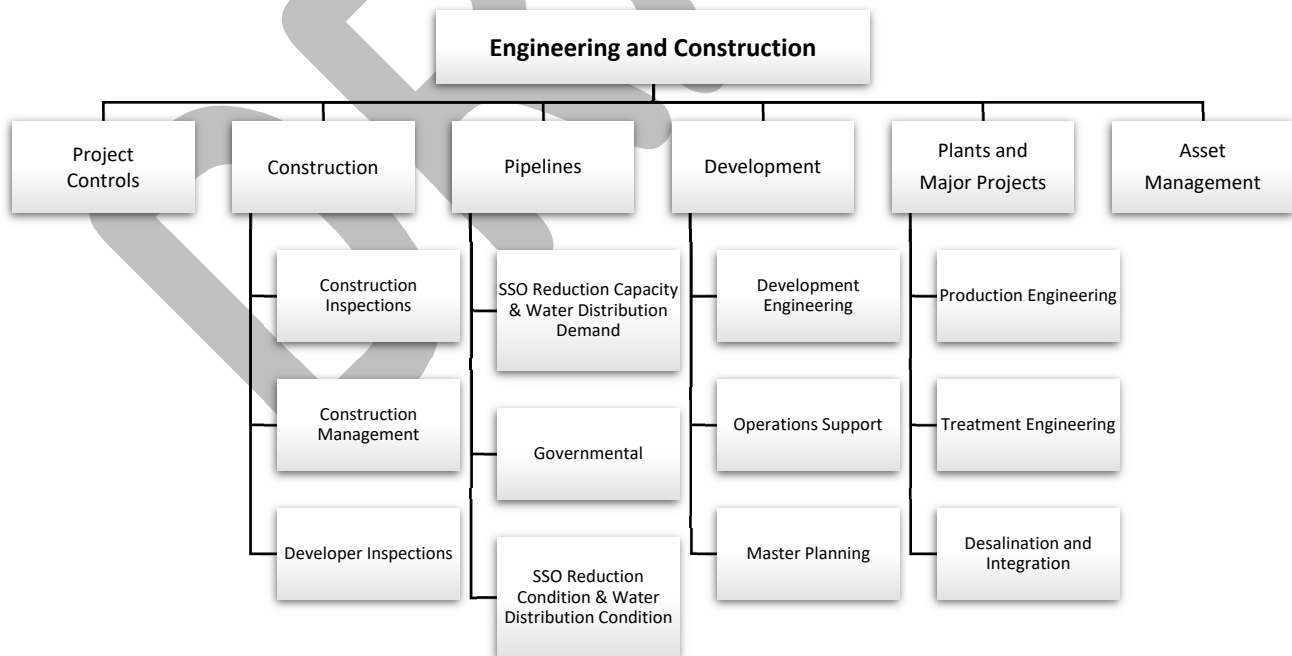
DISTRIBUTION AND COLLECTION



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 and water distribution 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 transmission projects, potable and recycled water production facilities, and wastewater treatment plants.
- **Asset Management** - Oversees efforts of condition assessment activities in order to maximize usage of SAWS assets and infrastructure. Support to operations is also provided by this unit.



ENGINEERING AND CONSTRUCTION

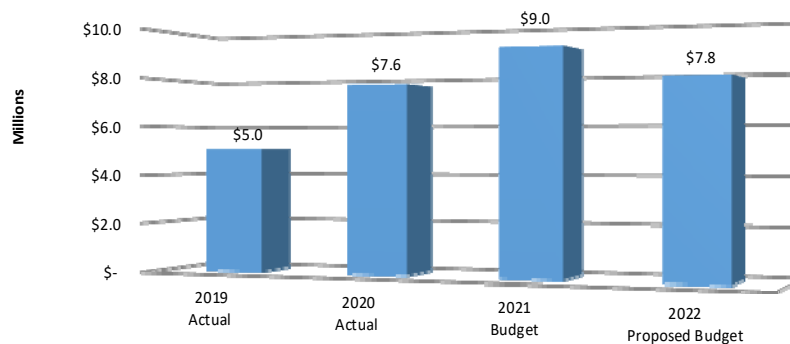
(\$ in thousands)

Expenditures by Type	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 17,356	\$ 18,093	\$ 18,778	\$ 18,765
Contractual Services	4,427	6,695	7,365	6,178
Materials and Supplies	119	49	64	94
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 21,902	\$ 24,837	\$ 26,207	\$ 25,037
Capitalized Cost	(16,880)	(17,235)	(17,200)	(17,251)
Total O&M	\$ 5,022	\$ 7,602	\$ 9,007	\$ 7,786
Capital Outlay	\$ 1	\$ -	\$ -	\$ 105

Expenditures by Department	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Office of the VP - Engineering and Construction	\$ 1,236	\$ 1,086	\$ 1,153	\$ 501
Asset Management	840	1,631	1,432	1,977
Central Water Integration Pipeline Project	619	257	356	-
Construction	6,419	6,862	7,060	6,839
Development	3,777	3,837	5,386	4,008
Pipelines	3,984	4,430	4,444	4,343
Plants and Major Projects	1,775	1,983	2,090	2,288
Project Controls	-	-	-	795
Tank Maintenance	3,252	4,751	4,286	4,286
O&M Before Capitalized Cost Total	\$ 21,902	\$ 24,837	\$ 26,207	\$ 25,037
Capitalized Cost	(16,880)	(17,235)	(17,200)	(17,251)
Grand Total	\$ 5,022	\$ 7,602	\$ 9,007	\$ 7,786

Full-Time Equivalent Positions	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Office of the VP - Engineering and Construction	10.5	12.0	9.0	3.0
Asset Management	9.5	7.5	9.5	11.5
Central Water Integration Pipeline Project	5.0	-	2.0	-
Construction	75.0	77.0	75.0	76.0
Development	35.0	35.0	34.5	35.5
Pipelines	45.0	45.0	45.0	44.0
Plants and Major Projects	17.5	21.5	19.0	21.0
Project Controls	-	-	-	7.0
Total Full-Time Equivalent Positions	197.5	198.0	194.0	198.0

ENGINEERING AND CONSTRUCTION

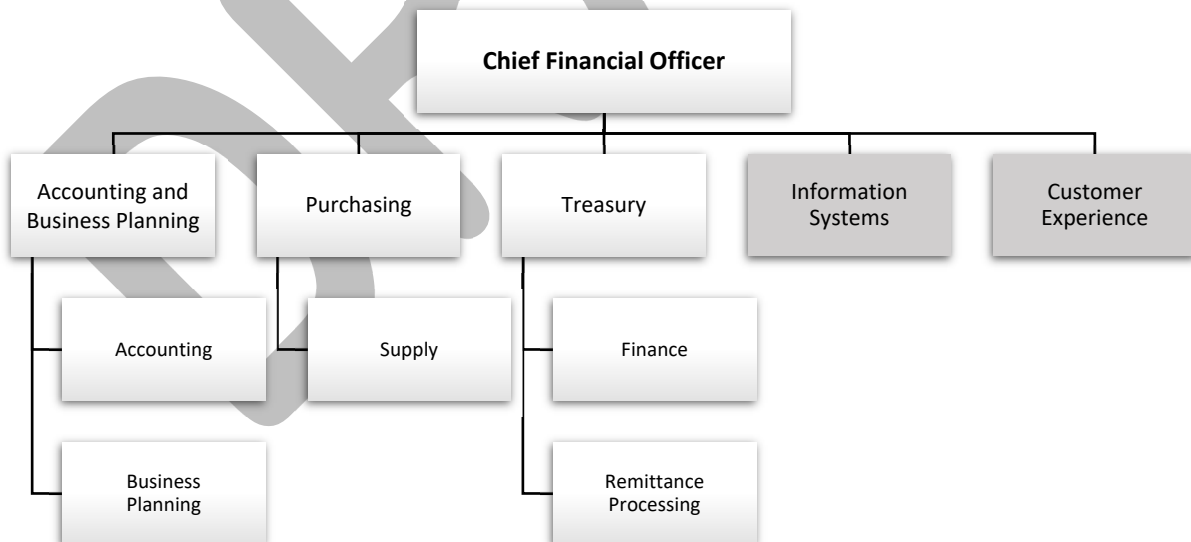


FINANCIAL SERVICES

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)

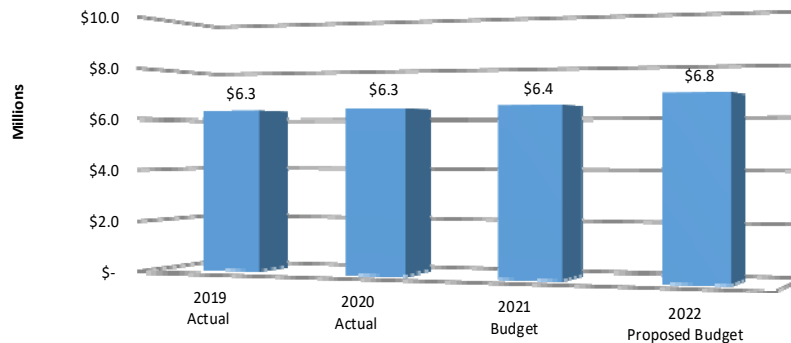
Expenditures by Type	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 5,550	\$ 5,730	\$ 5,795	\$ 5,757
Contractual Services	839	781	685	737
<i>Newspaper Published Notices*</i>	38	36	15	15
Materials and Supplies	71	(61)	41	42
Other Charges	20	91	124	448
O&M Before Capitalized Cost Total	\$ 6,480	\$ 6,541	\$ 6,645	\$ 6,984
Capitalized Cost	(191)	(208)	(220)	(137)
Total O&M	\$ 6,289	\$ 6,333	\$ 6,425	\$ 6,847
	-	-	-	-
Capital Outlay	\$ 1	\$ 1,065	\$ -	\$ 120

Expenditures by Department	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Office of the CFO	\$ 467	\$ 494	\$ 459	\$ 457
Accounting and Business Planning	3,034	3,159	3,016	3,269
Purchasing and Supply	2,097	1,901	2,004	2,070
Treasury	882	987	1,166	1,188
O&M Before Capitalized Cost Total	\$ 6,480	\$ 6,541	\$ 6,645	\$ 6,984
Capitalized Cost	(191)	(208)	(220)	(137)
Grand Total	\$ 6,289	\$ 6,333	\$ 6,425	\$ 6,847

Full-Time Equivalent Positions	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Office of the CFO	2.0	2.0	2.0	2.0
Accounting and Business Planning	29.0	30.0	29.0	30.0
Purchasing and Supply	24.0	24.0	24.0	24.0
Treasury	11.0	9.0	9.0	8.0
Total Full-Time Equivalent Positions	66.0	65.0	64.0	64.0

*In accordance with 86R House Bill 1495

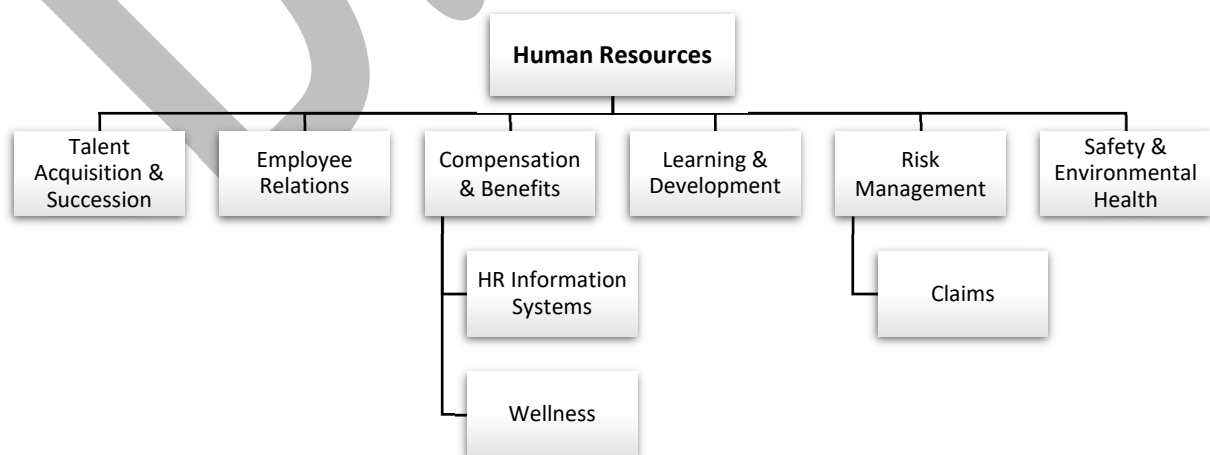
FINANCIAL SERVICES



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

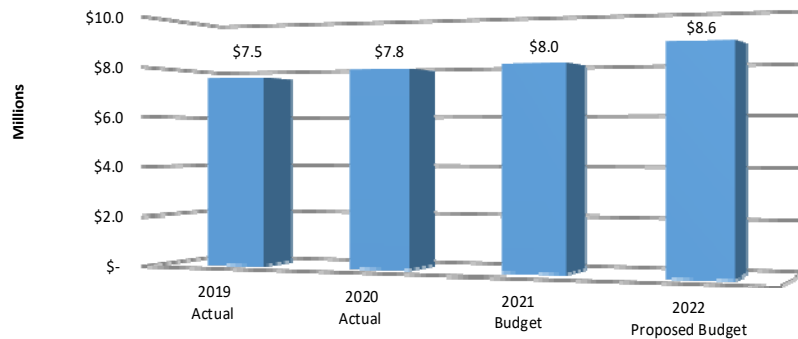
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Expenditures by Type	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 4,655	\$ 5,265	\$ 5,186	\$ 5,280
Contractual Services	1,684	1,217	1,422	1,494
Materials and Supplies	47	28	66	67
Other Charges	1,153	1,305	1,277	1,809
O&M Before Capitalized Cost Total	\$ 7,539	\$ 7,815	\$ 7,951	\$ 8,650
Capitalized Cost	-	-	-	-
Total O&M	\$ 7,539	\$ 7,815	\$ 7,951	\$ 8,650
Capital Outlay	\$ 2	\$ -	\$ -	\$ -

Expenditures by Department	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Human Resources	\$ 4,725	\$ 4,445	\$ 4,660	\$ 4,832
Risk Management	2,814	2,510	2,375	2,893
Safety and Environmental Health	-	860	916	925
O&M Before Capitalized Cost Total	\$ 7,539	\$ 7,815	\$ 7,951	\$ 8,650
Capitalized Cost	-	-	-	-
Grand Total	\$ 7,539	\$ 7,815	\$ 7,951	\$ 8,650

Full-Time Equivalent Positions	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Human Resources	32.0	33.0	33.0	33.0
Risk Management	9.0	9.0	9.0	9.0
Safety and Environmental Health	9.0	9.0	9.0	9.0
Total Full-Time Equivalent Positions	50.0	51.0	51.0	51.0

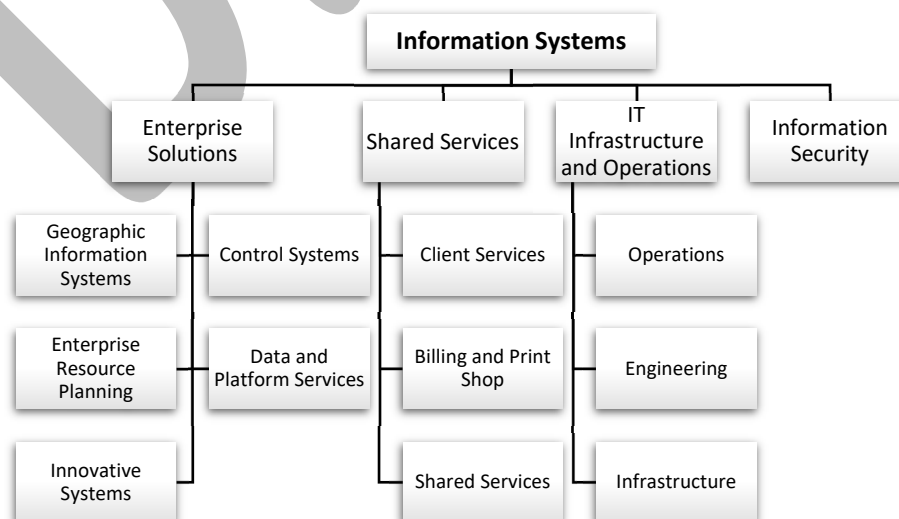
HUMAN RESOURCES



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

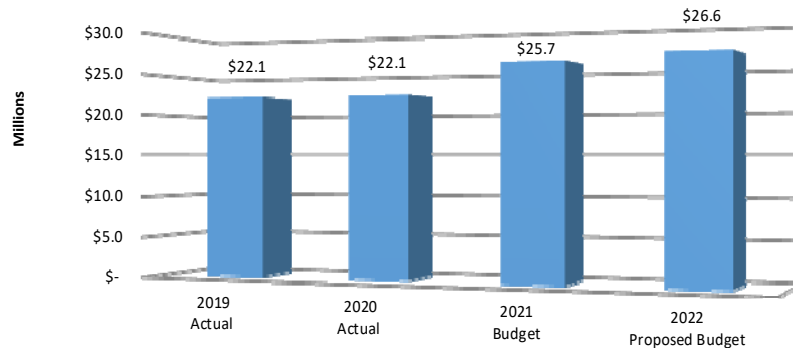
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Expenditures by Type	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 10,252	\$ 10,653	\$ 11,688	\$ 12,055
Contractual Services	12,722	12,836	15,526	16,288
Materials and Supplies	491	367	505	510
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 23,465	\$ 23,856	\$ 27,719	\$ 28,853
Capitalized Cost	(1,396)	(1,787)	(2,000)	(2,258)
Total O&M	\$ 22,069	\$ 22,069	\$ 25,719	\$ 26,595
Capital Outlay	\$ 1,897	\$ 1,670	\$ 2,385	\$ 2,385

Expenditures by Department	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Office of the CIO	\$ 1,518	\$ 1,472	\$ 2,042	\$ 2,126
Enterprise Solutions	7,858	8,095	9,271	9,790
IT Infrastructure & Operations	7,597	7,823	8,612	9,674
Shared Services	6,492	6,466	7,794	7,263
O&M Before Capitalized Cost Total	\$ 23,465	\$ 23,856	\$ 27,719	\$ 28,853
Capitalized Cost	(1,396)	(1,787)	(2,000)	(2,258)
Grand Total	\$ 22,069	\$ 22,069	\$ 25,719	\$ 26,595

Full-Time Equivalent Positions	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Office of the CIO	10.0	11.0	11.0	11.0
Enterprise Solutions	36.0	36.0	36.0	37.0
IT Infrastructure & Operations	29.5	30.5	30.5	31.5
Shared Services	28.0	28.0	28.0	29.0
Total Full-Time Equivalent Positions	103.5	105.5	105.5	108.5

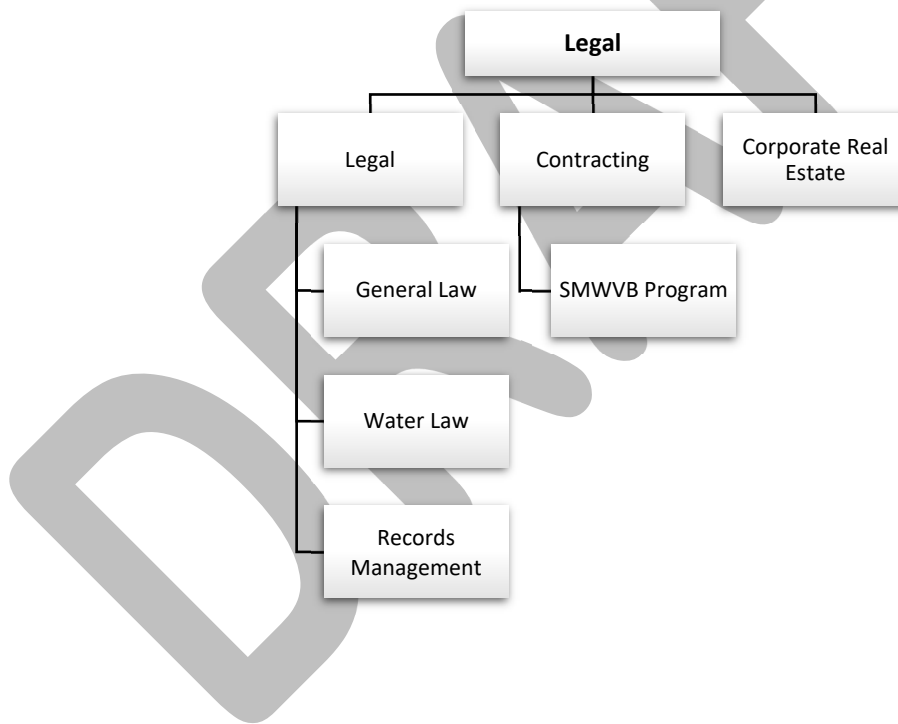
INFORMATION SYSTEMS



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. The Legal team also oversees the Records Management activities.
 - **Records Management** – Manages all utility records in compliance with the Texas Local Government Records Act, Texas Public Information Act and best records management practices.
- **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.



LEGAL

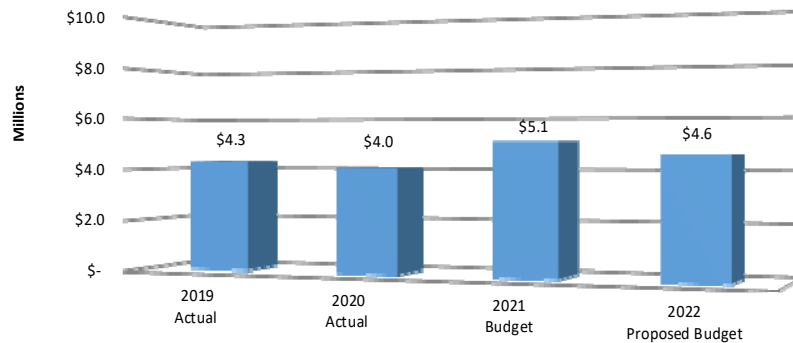
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Expenditures by Type	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 4,247	\$ 4,415	\$ 4,709	\$ 4,589
Contractual Services	1,986	1,743	2,604	2,155
Materials and Supplies	21	9	22	22
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 6,254	\$ 6,167	\$ 7,335	\$ 6,766
Capitalized Cost	(1,978)	(2,129)	(2,250)	(2,147)
Total O&M	\$ 4,276	\$ 4,038	\$ 5,085	\$ 4,619
Capital Outlay	\$ 204	\$ -	\$ -	\$ -

Expenditures by Department	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Contracting	\$ 1,500	\$ 1,571	\$ 1,792	\$ 1,571
Corporate Real Estate	590	583	685	689
Legal Department	4,164	4,013	4,858	4,506
O&M Before Capitalized Cost Total	\$ 6,254	\$ 6,167	\$ 7,335	\$ 6,766
Capitalized Cost	(1,978)	(2,129)	(2,250)	(2,147)
Grand Total	\$ 4,276	\$ 4,038	\$ 5,085	\$ 4,619

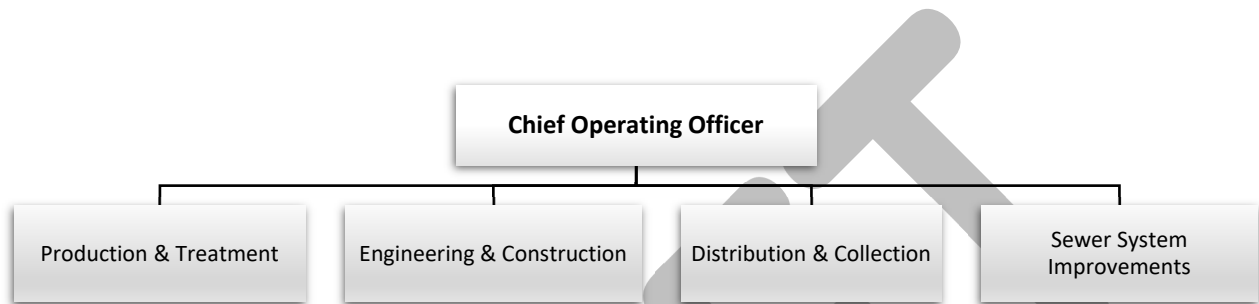
Full-Time Equivalent Positions	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Contracting	16.0	16.0	16.0	16.0
Corporate Real Estate	7.0	7.0	7.0	7.0
Legal Department	15.5	15.5	15.5	15.0
Total Full-Time Equivalent Positions	38.5	38.5	38.5	38.0

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

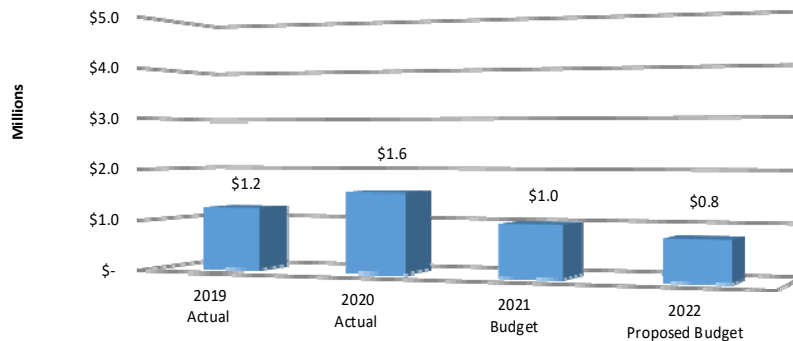
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Expenditures by Type	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 1,007	\$ 1,087	\$ 957	\$ 701
Contractual Services	196	467	30	60
Materials and Supplies	1	2	1	1
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 1,204	\$ 1,556	\$ 988	\$ 762
Capitalized Cost	-	-	-	-
Total O&M	\$ 1,204	\$ 1,556	\$ 988	\$ 762
Capital Outlay	\$ -	\$ -	\$ -	\$ -

Expenditures by Department	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Ofc of Chief Operating Officer	\$ 1,176	\$ 1,460	\$ 988	\$ 762
Sr. VP Engineering and Construction	28	96	-	-
O&M Before Capitalized Cost Total	\$ 1,204	\$ 1,556	\$ 988	\$ 762
Capitalized Cost	-	-	-	-
Grand Total	\$ 1,204	\$ 1,556	\$ 988	\$ 762

Full-Time Equivalent Positions	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Ofc of Chief Operating Officer	7.0	6.0	6.0	4.0
Sr. VP Engineering and Construction	1.0			
Total Full-Time Equivalent Positions	8.0	6.0	6.0	4.0

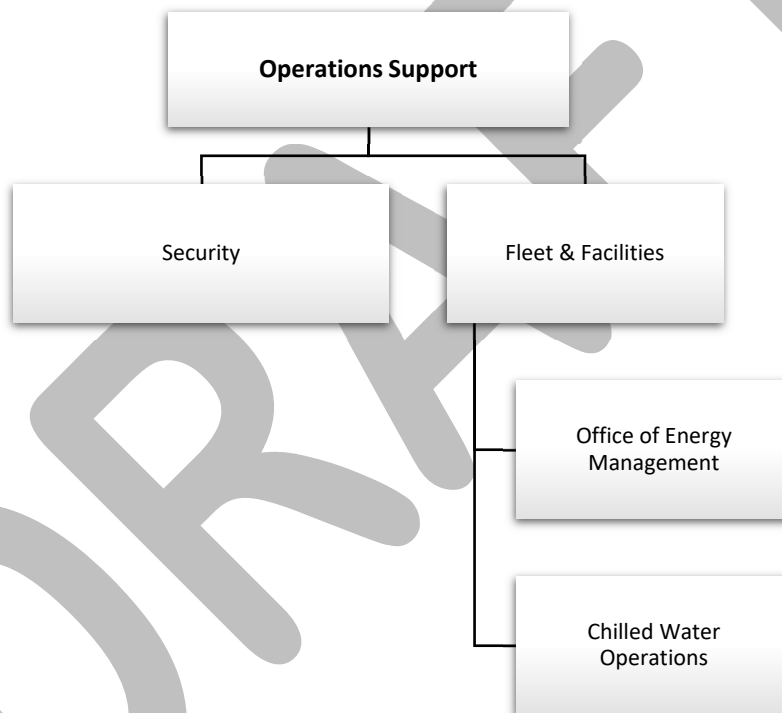
OPERATIONS



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

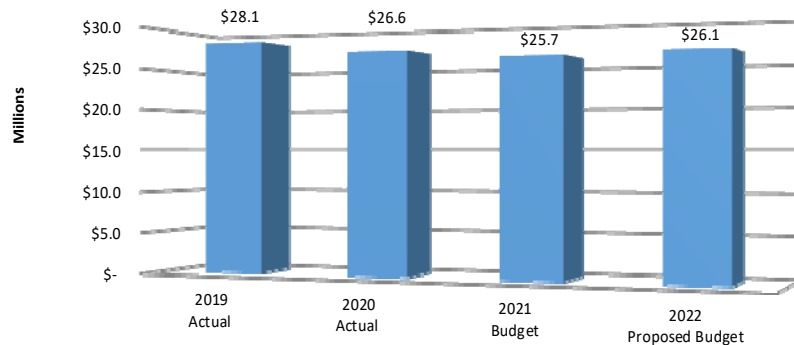
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Expenditures by Type	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 8,521	\$ 9,302	\$ 8,813	\$ 9,225
Contractual Services	15,938	14,627	14,624	13,830
Materials and Supplies	4,643	3,647	3,309	4,117
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 29,102	\$ 27,576	\$ 26,746	\$ 27,172
Capitalized Cost	(993)	(931)	(1,000)	(1,038)
Total O&M	\$ 28,109	\$ 26,645	\$ 25,746	\$ 26,134
Capital Outlay	\$ 5,723	\$ 7,976	\$ 5,301	\$ 7,001

Expenditures by Department	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Fleet and Facilities	\$ 25,461	\$ 23,331	\$ 22,918	23,357
Security	3,641	4,245	3,828	3,815
O&M Before Capitalized Cost Total	\$ 29,102	\$ 27,576	\$ 26,746	\$ 27,172
Capitalized Cost	(993)	(931)	(1,000)	(1,038)
Grand Total	\$ 28,109	\$ 26,645	\$ 25,746	\$ 26,134

Full-Time Equivalent Positions	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Fleet and Facilities	95.0	97.0	98.0	106.0
Security	11.0	11.0	11.0	11.0
Total Full-Time Equivalent Positions	106.0	108.0	109.0	117.0

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.

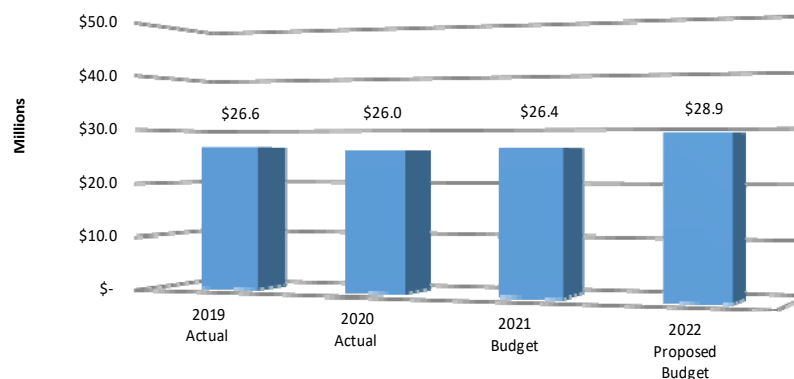
(\$ in thousands)

Expenditures by Type	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 20,208	\$ 20,775	\$ 17,978	\$ 21,060
Contractual Services	949	305	655	965
Materials and Supplies	-	-	-	-
Other Charges	6,196	5,702	8,515	7,638
O&M Before Capitalized Cost Total	\$ 27,353	\$ 26,782	\$ 27,148	\$ 29,664
Capitalized Cost	(727)	(752)	(750)	(752)
Total O&M	\$ 26,626	\$ 26,030	\$ 26,398	\$ 28,912
Capital Outlay	\$ -	\$ -	\$ -	\$ -

Expenditures by Department	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Other Requirements	\$ 27,353	\$ 26,782	\$ 27,148	29,664
O&M Before Capitalized Cost Total	\$ 27,353	\$ 26,782	\$ 27,148	\$ 29,664
Capitalized Cost	(727)	(752)	(750)	(752)
Grand Total	\$ 26,626	\$ 26,030	\$ 26,398	\$ 28,912

Full-Time Equivalent Positions	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Other Requirements	2.0	2.0	2.0	3.0
Total Full-Time Equivalent Positions	2.0	2.0	2.0	3.0

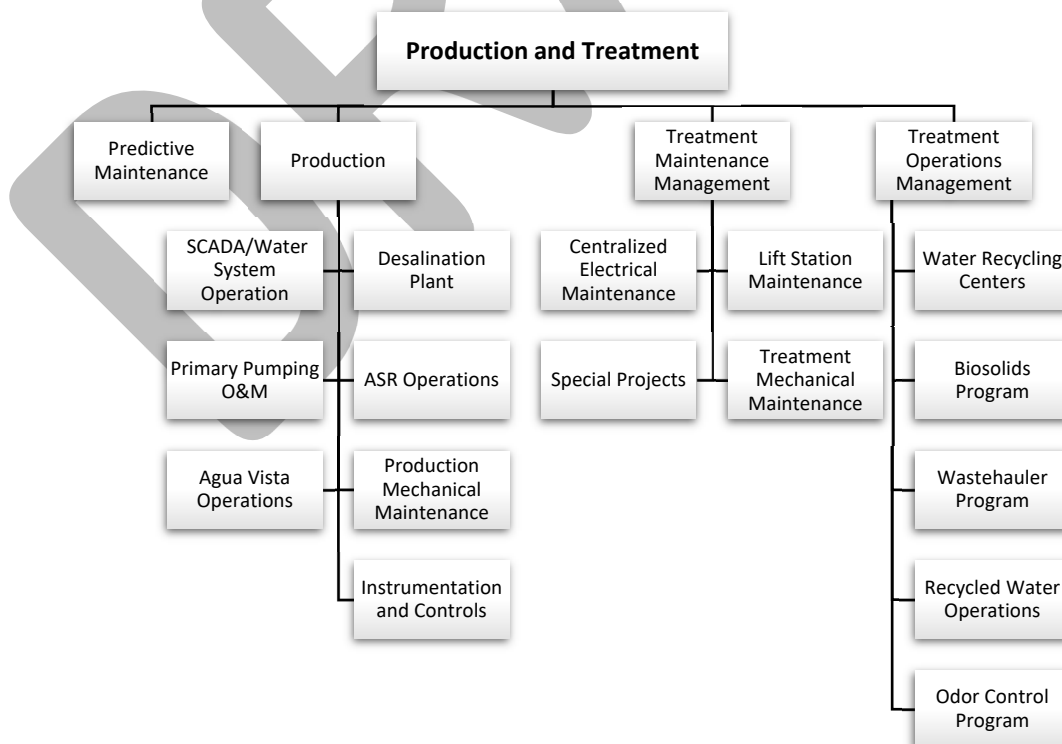
OTHER REQUIREMENTS



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, and management of SAWS-wide odor control program. 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, Aqua Vista Facility and the H₂Oaks Facility, which includes the Aquifer Storage and Recovery operations. Also manages the production mechanical maintenance unit and associated instrumentation and controls. This group supports the operation of the new Agua Vista Station, which receives and treats 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

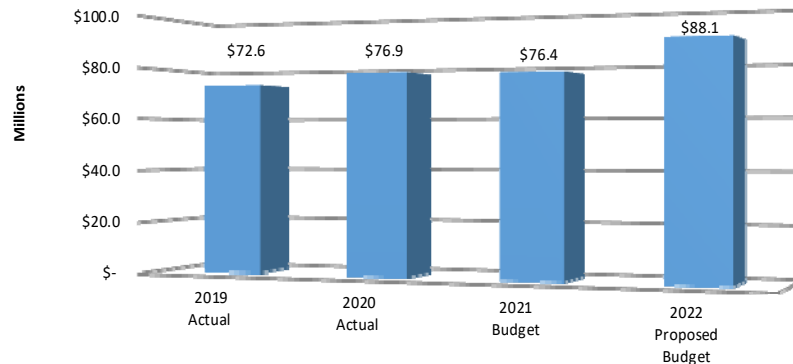
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Expenditures by Type	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 22,266	\$ 24,213	\$ 23,795	\$ 24,711
Contractual Services	37,811	39,551	39,680	50,004
Materials and Supplies	13,652	14,042	13,889	14,065
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 73,729	\$ 77,806	\$ 77,364	\$ 88,780
Capitalized Cost	(1,095)	(859)	(1,000)	(646)
Total O&M	\$ 72,634	\$ 76,947	\$ 76,364	\$ 88,134
Capital Outlay	\$ 1,439	\$ 1,861	\$ 1,470	\$ 1,670

Expenditures by Department	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Office of the VP - Production and Treatment	\$ 497	\$ 599	\$ 530	\$ 601
Ofc of Director - Production and Treatment Operati	81	76	66	83
Production	32,993	35,462	38,638	40,465
Treatment Maintenance Management	17,696	17,842	15,691	22,611
Treatment Operations Management	22,462	23,827	22,439	25,020
O&M Before Capitalized Cost Total	\$ 73,729	\$ 77,806	\$ 77,364	\$ 88,780
Capitalized Cost	(1,095)	(859)	(1,000)	(646)
Grand Total	\$ 72,634	\$ 76,947	\$ 76,364	\$ 88,134

Full-Time Equivalent Positions	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Office of the VP - Production and Treatment	3.0	3.0	3.0	3.0
Ofc of Director - Production and Treatment Operati	1.0	1.0	1.0	1.0
Production	90.0	99.0	96.0	99.0
Treatment Maintenance Management	116.0	111.0	117.0	114.0
Treatment Operations Management	73.0	75.0	73.0	77.0
Total Full-Time Equivalent Positions	283.0	289.0	290.0	294.0

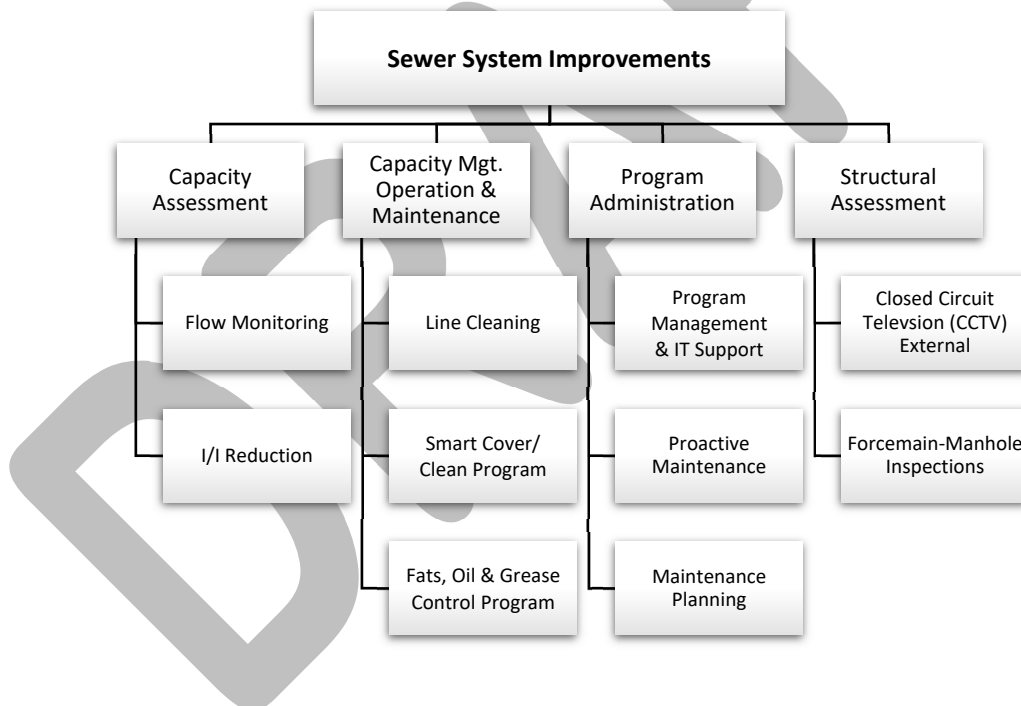
PRODUCTION AND TREATMENT



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

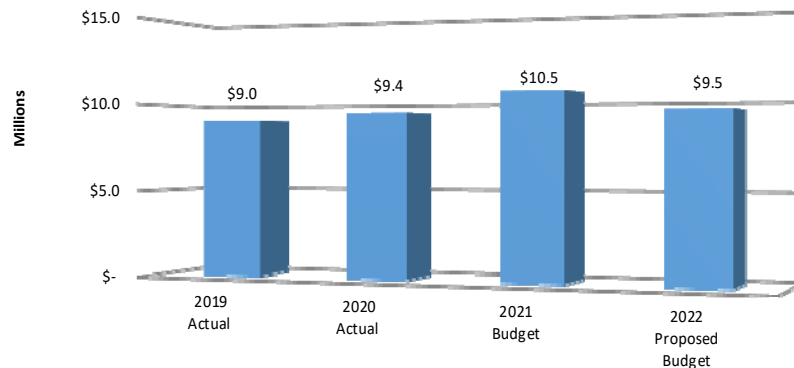
(\$ in thousands)

Expenditures by Type	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 2,893	\$ 2,636	\$ 2,599	\$ 2,485
Contractual Services	6,326	7,082	8,230	7,552
Materials and Supplies	67	60	51	44
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 9,286	\$ 9,778	\$ 10,880	\$ 10,081
Capitalized Cost	(327)	(396)	(356)	(586)
Total O&M	\$ 8,959	\$ 9,382	\$ 10,524	\$ 9,495
Capital Outlay	\$ -	\$ -	\$ -	\$ -

Expenditures by Department	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Capacity Assessment	\$ 1,285	\$ 1,096	\$ 1,010	1,260
Capacity Mgt O&M (CMOM)	1,953	2,403	4,284	3,748
Program Administration	3,647	2,720	2,676	2,463
Structural Sewer Assessment	2,401	3,559	2,910	2,610
O&M Before Capitalized Cost Total	\$ 9,286	\$ 9,778	\$ 10,880	\$ 10,081
Capitalized Cost	(327)	(396)	(356)	(586)
Grand Total	\$ 8,959	\$ 9,382	\$ 10,524	\$ 9,495

Full-Time Equivalent Positions	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Capacity Mgt O&M (CMOM)				1.0
Program Administration	35.0	31.0	30.0	28.0
Total Full-Time Equivalent Positions	35.0	31.0	30.0	29.0

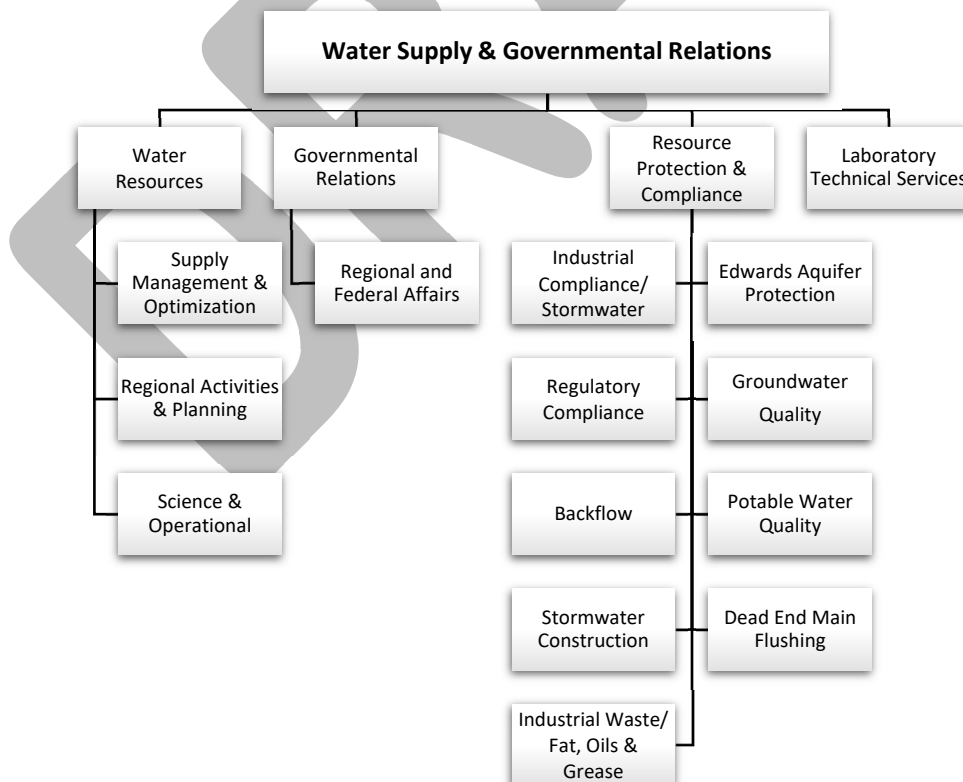
SEWER SYSTEM IMPROVEMENTS



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 daily activities associated with 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)

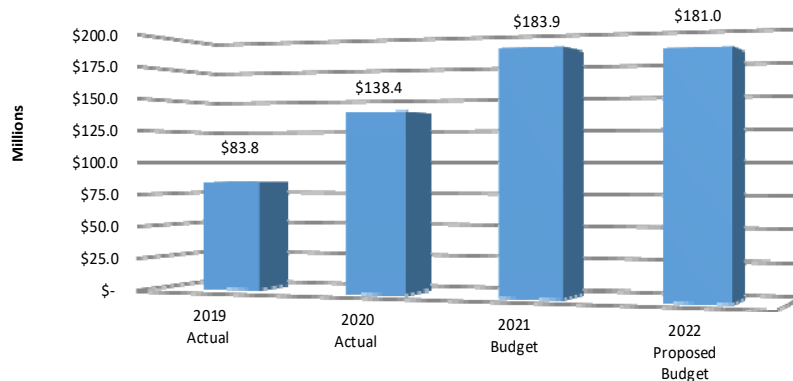
Expenditures by Type	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
O&M Before Capitalized Cost				
Salaries and Fringe Benefits	\$ 10,792	\$ 11,051	\$ 11,316	\$ 10,772
Contractual Services	72,476	126,827	172,036	169,595
State Lobbying Contracts*		116	189	245
Materials and Supplies	547	496	575	595
Other Charges	-	-	-	-
O&M Before Capitalized Cost Total	\$ 83,815	\$ 138,374	\$ 183,927	\$ 180,962
Capitalized Cost	(12)	-	-	-
Total O&M	\$ 83,803	\$ 138,374	\$ 183,927	\$ 180,962
Capital Outlay	\$ 90	\$ 208	\$ 290	\$ 200

Expenditures by Department	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Environmental Laboratory Services	\$ 2,396	\$ 2,563	\$ 2,630	\$ 2,617
Governmental Relations	1,800	1,699	1,356	1,201
Resource Protection & Compliance	8,357	8,256	8,628	8,660
Water Resources	71,262	125,856	171,313	168,484
O&M Before Capitalized Cost Total	\$ 83,815	\$ 138,374	\$ 183,927	\$ 180,962
Capitalized Cost	(12)	-	-	-
Grand Total	\$ 83,803	\$ 138,374	\$ 183,927	\$ 180,962

Full-Time Equivalent Positions	2019 Actual	2020 Actual	2021 Budget	2022 Proposed Budget
Environmental Laboratory Services	20.0	23.0	23.0	23.0
Governmental Relations	5.0	5.0	5.0	4.0
Resource Protection & Compliance	90.0	90.0	93.0	93.0
Water Resources	16.0	9.0	11.0	9.0
Total Full-Time Equivalent Positions	131.0	127.0	132.0	129.0

*In accordance with 86R House Bill 1495

WATER RESOURCES AND GOVERNMENTAL RELATIONS



FULL TIME EQUIVALENT POSITIONS

The 2022 Budget includes funding for 1,940 full-time equivalent (FTE) positions. This reflects a net increase of 39.5 authorized FTE positions from the 1,900.5 FTE positions budgeted in 2021.

A total of 28 FTE positions were added to the 2022 Budget:

- 1 Business Process Analyst, 7 Technical Field Investigators, 2 Program Data Coordinators and 2 Senior Customer Service Associates to support the full system wide deployment of the ConnectH2O Program, an advanced metering technology
- 1 Project Architect dedicated to Distribution & Collection, to support Capital Improvement Program (CIP) projects, design, renovation and specification development for Distribution & Collection related facilities
- 1 Project Engineer to provide hydraulic modeling analysis for complex pressure related operational challenges and end-user concerns
- 1 Graduate Engineer to oversee field related condition assessment work and contracts for large diameter water mains and valves
- 1 Systems Administrator responsible for monitoring, administering, and supporting the cyber security platforms used to protect SAWS
- 1 Senior Systems Programmer and 1 Manager of Application Services to support Information System's capacity to deliver projects that include organization initiatives such as AMI full deployment, Asset Management and Winter Storm Uri response. The existing capacity to deliver projects is exceeded by the requests received.
- 2 Millwright Mechanics to maintain work order coverage and make emergency repairs for the District Cooling System
- 6 Custodians which will allow SAWS to internally staff all custodial services at all SAWS facilities, replacing contract maintenance services
- 1 Equipment Operator to manage hauling of liquid sludge from the Agua Vista Station and discharge to the Clouse Water Recycling Center drying beds, clean the drying beds and assist the Clouse Water Recycling Center mechanical maintenance group at the dewatering process area
- 1 Learning Development Business Partner to identify, develop and facilitate the training required by the Consent Decree

In addition, the 2022 budget reflects the conversion of 23 Customer Service Associates from part-time to full-time positions, resulting in a net increase of 11.5 FTEs from the 2021 budget

The following table shows the distribution of funded FTE positions within each SAWS organizational unit authorized in each budget year from 2019 through 2022. 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.

FTEs by Organizational Unit	2019 Actual	2020 Actual	2021 Budget	2022 Budget
Board of Trustees and Pres/CEO Group	13.5	14.5	14.0	14.0
Communications and External Affairs	49.5	51.5	51.5	52.0
Customer Experience	316.5	321.0	329.5	353.0
Distribution and Collection	479.0	483.5	483.5	485.5
Engineering and Construction	197.5	198.0	194.0	198.0
Financial Services	66.0	65.0	64.0	64.0
Human Resources	50.0	51.0	51.0	51.0
Information Systems	103.5	105.5	105.5	108.5
Legal	38.5	38.5	38.5	38.0
Operations	8.0	6.0	6.0	4.0
Operations Support	106.0	108.0	109.0	117.0
Production and Treatment	283.0	289.0	290.0	294.0
Sewer System Improvements	35.0	31.0	30.0	29.0
Water Resources and Governmental Relations	131.0	127.0	132.0	129.0
Other Requirements	2.0	2.0	2.0	3.0
Total	1,879.0	1,891.5	1,900.5	1,940.0

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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 2022 CIP program totals \$582.8 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	\$ 7.5	\$ 41.4	\$ 52.4	\$ -	\$ 101.4
Capital Recovery Fees	63.0	25.0	25.0	-	113.0
Debt Proceeds	147.7	95.9	118.9	5.9	368.4
Total Sources of Funds	\$ 218.2	\$ 162.3	\$ 196.3	\$ 5.9	\$ 582.8
Uses of Funds					
Corporate	185.4	2.5	15.1	-	203.0
Governmental	-	25.7	25.7	-	51.4
Mains - New	-	10.0	51.9	-	61.9
Main Replacements	-	36.5	13.4	-	49.9
Water Resources	30.0	-	-	-	30.0
Production	-	75.6	-	-	75.6
Collection Facilities	-	-	1.0	-	1.0
Treatment	-	-	77.5	-	77.5
Chilled Water	-	-	-	5.9	5.9
Overhead	2.7	12.1	11.8	-	26.6
Total Uses of Funds	\$ 218.1	\$ 162.4	\$ 196.4	\$ 5.9	\$ 582.8

The 2022 Water Supply program totals \$215 million and includes \$184 million for deployment of the ConnectH2O Advanced Metering Infrastructure (AMI) system, and \$22.9 million for improvements to the Randolph Pump Station.

The 2022 Water Delivery program totals \$162.4 million for production facilities upgrades, replacements and expansion as well as water main replacements. The Water Delivery CIP also includes \$25.3 million for improvements primarily for generators at six different pump stations to improve the resiliency of the Water Delivery system during extreme weather events. Overall, the total level of CIP investment in Water Delivery infrastructure for 2022 is 31% higher than SAWS average annual investment in Water Delivery infrastructure over the last five years.

The 2022 Wastewater program totals \$196.4 million. The single largest wastewater project is the Mitchell Lake Dam and Spillway project (\$72 million) which will address U.S. Environmental Protection Agency (EPA) requirements to build a constructed wetland below Mitchell Lake to achieve compliance with permitted effluent limitations. The Wastewater CIP amount also includes \$51.9 million, or 26.4%, to support 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 2022 is the Small and Large Diameter Condition Remedial Measures project at a cost of \$15.8 million.

The overall funding split for the 2022 water production and delivery and the wastewater collection and treatment program is 87.9% repairs and replacements and 12.1% 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.

The following three projects fit the above criteria and are not considered routine expenditures:

- (1) Pump Station Generators & Resiliency Measures (\$25.3 million): Improvements primarily for generators at six primary pump stations to improve the resiliency of the Water Delivery system during extreme weather events, such as those experienced in February 2021. The pump stations identified for this project include Mission, Marbach, Artesia, Turtle Creek, Wurzbach and Nacogdoches.
- (2) ConnectH2O Advanced Metering Infrastructure (AMI) Deployment (\$184 million): Full system wide deployment begins in 2022 and is expected to run from 2022 through 2026 but will be subject to authorization from the SAWS Board of Trustees prior to moving forward. Full implementation of the AMI solution will have a significant impact on SAWS meter to cash process. It will greatly improve SAWS ability to provide relevant and timely information to customers about their water usage, likely reducing water usage because of leaks on the customer side of the meter and improve conservation efforts.
- (3) Mitchell Lake Dam and Spillway Project (\$72 million): This project will address U.S. Environmental Protection Agency (EPA) requirements to build a constructed wetland below Mitchell Lake to achieve compliance with permitted effluent limitations.

2022 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	64,250
	Contracts and Project Management System (CPMS) Upgrades Phase 3	Acquisition	102,800
	Owner Controlled Construction Charges (OCCC)	Construction	2,638,743
	Water Delivery Overhead	Overhead	11,825,000
	Corporate Total		14,630,793
Mains - New			
	Hollywood Park and Hill Country Village: PZ7 – PZ1096 Integration	Design	128,500
	IH-10: Heuermann Rd. to La Cantera Parkway 36-inch Water Main (Ph. B)	Design	2,266,740
	Mathis Rd.: Hardy Rd. to Waterwood Pass Approach Main	Design	467,226
	Talley Rd. and Ray Lieck SCADA for PRVs	Design	205,600
	Water Main Oversizing	Construction	3,598,000
	Zigmont Rd 12-inch Water Main	Construction	3,289,600
	Mains - New Total		9,955,666
Mains - Replacement			
	Governmental Mains	Construction	25,700,000
	Castle View Water Main Replacement	Construction	4,437,362
	Dead End Main Elimination via Looping	Design	3,289,600
	Highland Park – North Water Main Replacement	Construction	3,234,376
	Highland-Goliad Water Main Replacement	Design	755,041
	N San Felipe Water Main Replacement	Design	203,814
	Primrose Oaks South Water Main Replacement	Construction	5,551,200
	Valves, Services and Meter Replacements	Construction	17,476,000
	Woodlawn Lake Water Main Replacement	Construction	1,517,410
	Mains - Replacement Total		62,164,803
Production			
	Indian Hills 2.5 Million Gallons Elevated Storage Tank	Design	719,600
	King Street Pump Station Rehabilitation	Construction	18,941,467
	Lorimor 3.0 Million Gallons Elevated Storage Tank	Acquisition	514,000
	Market Street Pump Station Disinfection System Upgrades	Construction	2,706,056
	Mission Pump Station Additional Well #9	Construction	6,065,200
	Naco PS Valve and Pipe Replacement	Design	343,866
	Production Facilities Engineering Work Order Contract	Design	1,028,000
	Pump Station Generators & Resiliency Measures (Mission, Marbach and Artesia)	Construction	16,653,600
	Pump Station Generators & Resiliency Measures (Turtle Creek, Wurzbach, Naco)	Acquisition	3,454,080
	Pump Station Generators & Resiliency Measures (Turtle Creek, Wurzbach, Naco)	Design	5,181,120
	Pump Station Rehabilitation Phase 14 – Inwood	Design	822,400
	Ranch Town No. 2 Pump Station Improvements	Construction	5,242,800
	Rhoda (Verano) 2.5 Million Gallons Elevated Storage Tank	Design	719,600
	Sunset & Evans Tank Altitude Valve Replacement	Construction	1,233,600
	University Pump Station Additional 5 Million Gallons Ground Storage Tank	Construction	7,196,000
	University Tank #1 Replacement	Design	699,040
	Water Production Facilities Electrical Upgrades - Tippecanoe, Bear Creek, Bear Spring	Construction	3,391,475
	Wurzbach Tank #1 Replacement	Design	699,040
	Production Total		75,610,944
Water Delivery Total			\$ 162,362,205

¹ Includes 2.8% projected inflation

2022 CAPITAL IMPROVEMENT PLAN SUMMARY

<i>Core Business</i>	<i>CIP Category / Project Title</i>	<i>Phase</i>	<i>Programmed Amount¹</i>
Wastewater			
Corporate			
	Contracts and Project Management System (CPMS) Upgrades Phase 3	Acquisition	102,800
	General Legal Services	Acquisition	436,900
	Owner Controlled Construction Charges (OCCC)	Construction	14,203,596
	Wastewater Overhead	Overhead	12,125,000
	Corporate Total		26,868,296
Collection Facilities			
	Six Mile Creek Odor Control	Construction	1,028,000
	Collection Facilities Total		1,028,000
Mains - New			
	Classen Steubing New Bore Alignment	Construction	2,261,600
	Sewer Main Oversizing	Construction	11,102,400
	Mains - New Total		13,364,000
Mains - Replacement			
	Governmental Mains	Construction	25,700,000
	Capacity, Management, Operation and Maintenance (CMOM)	Construction	12,850,000
	Main Replacements - Sewer - SAWS Crews	Construction	3,598,000
	Sewer Laterals	Construction	5,448,400
	Small and Large Diameter Condition Remedial Measures	Construction	15,831,200
	W-52 Culebra Creek Sewer Capacity Relief, south of Grissom Road	Design	1,680,780
	W-9 Upper Leon Creek Sewer Capacity Storage and Relief, Culebra Creek to Whitby Rd	Design	6,743,680
	Wastewater Main Replacement Work Order Engineering Contract	Design	5,756,800
	Mains - Replacement Total		77,608,860
Treatment			
	Medio Creek WRC Plant 1 Improvements	Design	1,542,000
	Mitchell Lake Dam and Spillway	Construction	71,960,000
	Steven M. Clouse WRC Biosolids Dewatering and Conveying Systems Upgrades	Design	1,644,800
	Steven M. Clouse WRC Tertiary Filter Expansion Project	Design	1,336,400
	Treatment Facilities Engineering Work Order Contract	Design	1,028,000
	Treatment Total		77,511,200
Wastewater Total			\$ 196,380,356

¹ Includes 2.8% projected inflation



2022 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			
	Aquifer Storage & Retrieval (ASR) Lime Silo Replacement	Construction	3,598,000
	ASR Pipeline Cathodic Protection Replacement	Design	308,400
	CONNECT H2O Automated Metering Infrastructure	Construction	184,095,907
	General Legal Services	Acquisition	64,250
	Owner Controlled Construction Charges (OCCC)	Construction	1,461,121
	Randolph Pump Station Improvements (Pump Station Rehabilitation Ph. 13)	Construction	22,922,344
	Water Supply Overhead	Overhead	2,500,000
Water Supply Total			\$ 214,950,022
Recycled Water			
Recycled Water			
	Governmental Adjustments	Construction	205,600
	East Houston St. Pump Station Disinfection System Upgrades	Design	2,570,000
	Recycled Water Customer Lines	Design	205,600
	Recycled Water Overhead	Overhead	200,000
Recycled Water Total			\$ 3,181,200
Chilled Water			
Chilled Water			
	Chilled Water Overhead	Overhead	200,000
	Chiller Replacement – Commerce Street District Cooling Plant	Construction	2,467,200
	District Cooling System – Plant Improvements	Construction	2,097,120
	Owner Controlled Construction Charges (OCCC)	Construction	131,584
	Replace Plant Piping at Commerce Street District Cooling Plant	Construction	1,028,000
Chilled Water Total			\$ 5,923,904
Grand Total			\$ 582,797,687

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
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10897
Project: General Legal Services - WD - 2022
Programmed Amount: \$64,250
Core Business: Water Delivery
Category: WD - Corporate
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 \$62,500 (2022)

Design

Construction

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10900
Project: Water Delivery OCCC 2022
Programmed Amount: \$2,638,743
Core Business: Water Delivery
Category: WD - Corporate
Phase: Construction
Council District: System Wide



Description and Scope:

The Owner Controlled Construction Changes (OCCC) fund was established to improve monitoring and efficiency of construction 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:

Changes that occur on construction projects must be approved by SAWS Board of Trustees if over \$100,000.

Funding Information

Acquisition

Design

Construction \$2,566,870 (2022)

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

SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET

PROJECT OVERVIEW

Project ID: Pro-11475
Project: Water Delivery Overhead 2022
Programmed Amount: \$11,825,000
Core Business: Water Delivery
Category: WD - Corporate
Phase: Construction
Council District: System Wide



Description and Scope:

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 2021 and prior year CIP projects and the future 2022 CIP projects.

Justification:

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.

Funding Information

Acquisition

Design

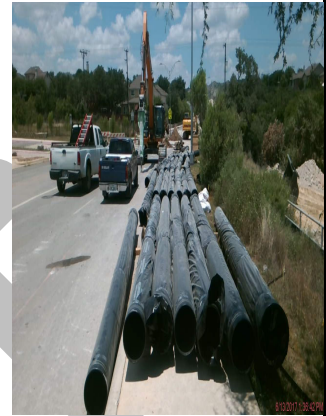
Construction \$11,825,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10745
Project: Hollywood Park and Hill Country Village: PZ7 - 1096 Interconnect
Programmed Amount: \$128,500
Core Business: Water Delivery
Category: WD - Mains New
Phase: Design
Council District: District 09, OCL



Description and Scope:

This project will design and construct a master Pressure Reducing Valve (PRV) to integrate Pressure Zone 7 (PZ 7) with PZ 1096 to provide a more reliable water supply.

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. This will also add redundancy to the system in the event that the Black Hawk pump station is offline.

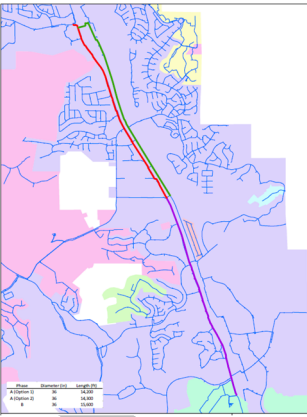
Funding Information

Acquisition

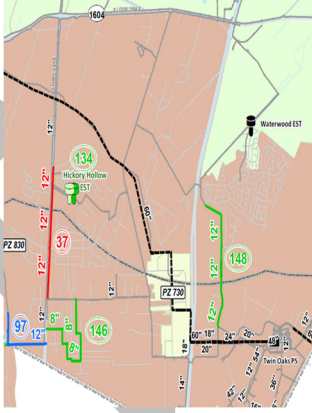
Design	\$125,000	(2022)
Construction	\$1,300,000	(2023)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>		
Project ID:	Pro-11513	
Project:	IH-10: Heuermann Rd. to La Cantera Parkway 36-inch Water Main (Phase B)	
Programmed Amount:	\$2,266,740	
Core Business:	Water Delivery	
Category:	WD - Mains New	
Phase:	Design	
Council District:	District 08	
Description and Scope:		
<p>This is the second phase of a project that removes existing bottlenecks along Interstate Highway 10 (IH-10). These existing bottlenecks impede IH-10 Pump Station water from efficiently reaching the northernmost customers within pressure zone 1400W. This project is required to meet TCEQ requirements of a minimum pressure of 35 psi during peak demands in a region experiencing significant growth. This project will install approximately 2.95 miles of new 36-inch water main along IH-10 from the IH-10 booster station to the existing 36-inch water main near the intersection of Heuermann and IH-10.</p>		
Justification:		
<p>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.</p>		
Funding Information		
Acquisition		
Design	\$2,205,000	(2022)
Construction	\$17,971,200	(2024)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>		

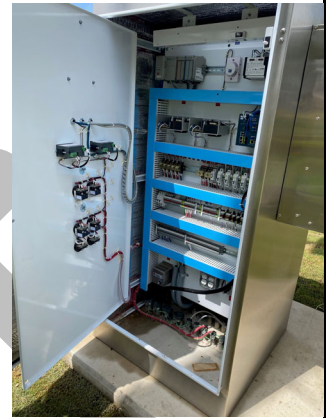
**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>		
Project ID:	Pro-00174	
Project:	Mathis Rd - Hardy Road to Waterwood Pass Approach Main	
Programmed Amount:	\$467,226	
Core Business:	Water Delivery	
Category:	WD - Mains New	
Phase:	Design	
Council District:	OCL	
Description and Scope:		
This project will install a new 12-inch water main along Mathis Rd from Hardy Rd. to the existing 16-inch water main near Waterwood Pass Dr.		
Justification:		
This 12-inch water main will replace the undersized existing 4-inch water mains and supply redundancy for approximately 1,500 customers within the far east pressure zone 830 area. This project will also serve projected growth in southern pressure zone 830.		
Funding Information		
Acquisition		
Design	\$454,500	(2022)
Construction	\$1,808,580	(2024)
Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.		

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11689
Project: Talley Rd. & Ray Lieck SCADA for PRVs
Programmed Amount: \$205,600
Core Business: Water Delivery
Category: WD - Mains New
Phase: Design
Council District: OCL



Description and Scope:

This project will design SCADA and electrical components to be added to the West Oak Estates and Elm Valley PRVs, located along Ray Lieck and Talley Rd.

Justification:

Pressure Relief Valves (PRVs) feed critical areas and need to be upgraded to SAWS standards. Supervisory Control and Data Acquisition (SCADA) is a system that monitors and controls field devices at SAWS remote sites.

Funding Information

Acquisition

Design	\$200,000	(2022)
Construction	\$2,000,000	(2023)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10903
Project: Water Main Oversizing 2022 - SAWS
Programmed Amount: \$3,598,000
Core Business: Water Delivery
Category: WD - Mains New
Phase: Construction
Council District: System Wide



Description and Scope:

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.

Justification:

Participating in oversizing is a cost effective way to meet the needs of growth. It is funded by impact fees collected from new development.

Funding Information

Acquisition

Design

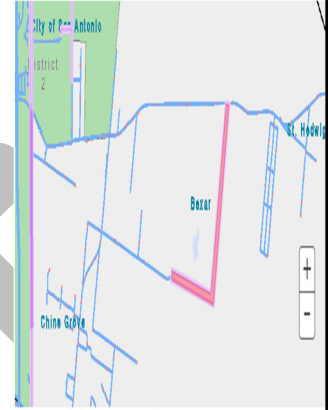
Construction \$3,500,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10743
Project: Zigmont Rd 12-inch Water Main
Programmed Amount: \$3,289,600
Core Business: Water Delivery
Category: WD - Mains New
Phase: Construction
Council District: OCL



Description and Scope:

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.

Justification:

This project provides capacity for projected growth and a redundant supply for 150 customers in eastern Pressure Zone 828. This project is impact fee eligible.

Funding Information

Acquisition

Design	\$675,424	(2021)
Construction	\$3,200,000	(2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10906
Project: Governmental Water - 2022
Programmed Amount: \$25,700,000
Core Business: Water Delivery
Category: WD - Governmental Water
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 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.

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 \$25,000,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11625
Project: Castle View Water Main Replacement
Programmed Amount: \$4,437,362
Core Business: Water Delivery
Category: WD - Main Replacement
Phase: Construction
Council District: District 02



Description and Scope:

This project will replace approximately 1.3 miles of 8-inch water main and 0.9 miles of 12-inch water main installed by open cut. These water mains serve Park Village Elementary School and East Village in NE San Antonio. By completing this project, the area will have a significant improvement in the level of service regarding main failures and will prevent the potential loss of service to the school.

Justification:

The purpose of this project is to replace deteriorating water mains that have a high probability of failure and are near the end of their useful life. The mains are made of Asbestos Cement pipe and have an average age of 51 years old and have a history of approximately 91 water main failure work orders and approximately 9 service line work orders over the past 10 years. A desktop condition and risk assessment was performed for this area and indicated the water mains along Midcrown Drive as the highest priority for replacement in the next 5 years as it has a risk score of 20 out of a maximum of 25 points due to serving a school.

Funding Information

Acquisition

Design	\$485,576	(2021)
Construction	\$4,316,500	(2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11510
Project: Dead End Main (DEM) Elimination via Looping 2022
Programmed Amount: \$3,289,600
Core Business: Water Delivery
Category: WD - Main Replacement
Phase: Construction
Council District: System Wide



Description and Scope:

The Dead End Main (DEM) Flushing Program is a required program to meet TCEQ regulations, 30 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 will be reviewed for abandonment or elimination due to potential quality issues resulting from the mains not holding residual, which cannot be solved with auto-flushers. The design consultant for this project is preparing design plans to eliminate 26 of the dead end water mains that were reviewed and determined to be most practical. This funding will be to continue the design and construction work of eliminating these DEMs. 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 the 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.

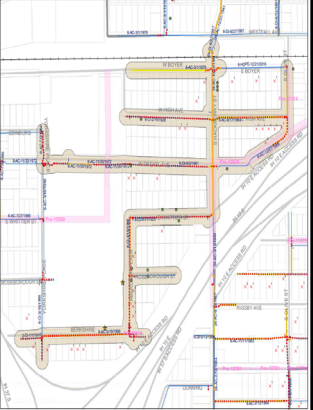
Funding Information

Acquisition


Design	\$430,355	(2022)
Construction	\$2,769,645	(2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<p><u>PROJECT OVERVIEW</u></p> <p>Project ID: Pro-11624</p> <p>Project: Highland Park North Water Main Replacement</p> <p>Programmed Amount: \$3,234,376</p> <p>Core Business: Water Delivery</p> <p>Category: WD - Main Replacement</p> <p>Phase: Construction</p> <p>Council District: District 02</p>							
<p>Description and Scope:</p> <p>This project will replace approximately 1.2 miles of 8-inch water main installed by open cut, one-fifth of a mile of 24-inch diameter pipe of water mains installed by open cut, and 115 feet of 24-inch diameter pipe installed by trenchless excavation. These water mains serve the Center for Health Care Services and the Young Women's Leadership Academy.</p> <p>Justification:</p> <p>The purpose of this project is to replace deteriorating water mains that have a high probability of failure and are near the end of their useful life. The mains are made of Asbestos Cement pipe and Cast Iron, and have an average age of 95 years old, and have a history of approximately 42 water main failure work orders and approximately 14 service line failure work orders over the past 10 years. A desktop condition and risk assessment was performed for this area and indicated the water mains along Hackberry Street as the highest priority for replacement in the next 5 years as it has a risk score of 20 out of a maximum of 25 points due to their large diameter (24 inches).</p>							
<p>Funding Information</p> <p>Acquisition</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 20%;">Design</td> <td style="width: 40%;">\$376,062</td> <td style="width: 40%;">(2021)</td> </tr> <tr> <td>Construction</td> <td>\$3,146,280</td> <td>(2022)</td> </tr> </table> <p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>		Design	\$376,062	(2021)	Construction	\$3,146,280	(2022)
Design	\$376,062	(2021)					
Construction	\$3,146,280	(2022)					

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<p><u>PROJECT OVERVIEW</u></p> <p>Project ID: Pro-11628</p> <p>Project: Highland-Goliad Water Main Replacement</p> <p>Programmed Amount: \$755,040</p> <p>Core Business: Water Delivery</p> <p>Category: WD - Main Replacement</p> <p>Phase: Design</p> <p>Council District: District 03</p>							
<p>Description and Scope:</p> <p>Design the replacement of approximately 3.6 miles of 8-inch diameter installed by open cut. Some of the mains serve the Highland Hills Baptist School, near E. Southcross and Goliad Rd. just southeast of downtown San Antonio. The project is planned for construction in 2023. By completing this project, the area will have a significant improvement in the level of service regarding main failures and the potential loss of service to the school can be avoided.</p> <p>Justification:</p> <p>The purpose of this project is to replace deteriorating water mains that have a high probability of failure and are near the end of their useful life. The mains are made of Asbestos Cement pipe, Cast Iron, Ductile Iron and Concrete Pressure Pipe with a maximum age of 72 years, and have a history of approximately 83 water main failure work orders and 30 service line failure work orders over the past 10 years. The existing sizes varies from 2-inches to 24-inches. The majority of the mains are located in alleys. A desktop condition and risk assessment was performed for this area and indicated the water mains in the alleyway parallel to Lyric Ave that serve the Highland Hills Baptist School to have the highest priority for replacement in the next 5 years as it has a risk score of 20 out of a maximum of 25 points.</p>							
<p>Funding Information</p> <p>Acquisition</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Design</td> <td style="width: 35%;">\$734,475</td> <td style="width: 50%;">(2022)</td> </tr> <tr> <td>Construction</td> <td>\$4,896,503</td> <td>(2023)</td> </tr> </table> <p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>		Design	\$734,475	(2022)	Construction	\$4,896,503	(2023)
Design	\$734,475	(2022)					
Construction	\$4,896,503	(2023)					

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11627
Project: N. San Felipe Water Main Replacement
Programmed Amount: \$203,813
Core Business: Water Delivery
Category: WD - Main Replacement
Phase: Design
Council District: District 05



Description and Scope:

Design the replacement of approximately one mile of 8-inch diameter pipe of water mains installed by open cut. Some of the mains serve Holy Cross High School and Gus Garcia Middle School located on San Felipe, near Culebra Rd. and N. General McMullen. By completing this project, the area will have a significant improvement in the level of service regarding main failures and major service interruptions will be avoided for the schools.

Justification:

The purpose of this project is to replace deteriorating water mains that have a high probability of failure and are near the end of their useful life. The mains are made of Asbestos Cement and Cast Iron pipe, and have an average age of 60 years old, and have a history of approximately 32 work orders and 6 service line work orders over the past 10 years. A desktop condition and risk assessment was performed for this area and indicated the water mains along N. San Felipe from Dartmouth Street to Rivas Street as the highest priority for replacement in the next 5 years as they serve schools and have a risk score of 15 out of a maximum of 25 points.

Funding Information

Acquisition

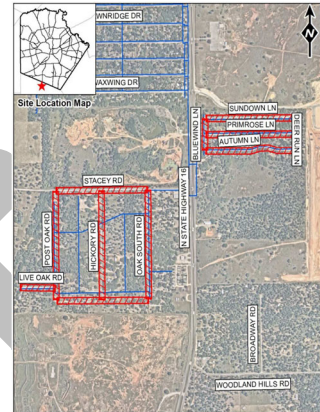
Design	\$198,262	(2022)
Construction	\$1,321,749	(2023)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10744
Project: Primrose Oaks South Water Main Replacement
Programmed Amount: \$5,551,200
Core Business: Water Delivery
Category: WD - Main Replacement
Phase: Construction
Council District: OCL



Description and Scope:

This project will replace approximately 2.9 miles of undersized (<6-inch) water main with 8-inch and 12-inch water main and will install 0.9 miles of new 8-inch and 12-inch water main. Additionally, 1.2 miles of undersized pipe will be abandoned altogether. The water mains are along Post Oak, Live Oak Road, Oaks Drive, Bluewind Lane, Sundown Lane, Deer Run Lane, and Autumn Lane and serve about 100 customers in SAWS service area in Atascosa County.

Justification:

SAWS is replacing these water mains due to a high likelihood of failure when compared to the rest of the water system, considering several factors including pipe age, pipe material, surrounding soil type, and main break history. This project will improve pressures during periods of peak demand. This project is impact fee eligible.

Funding Information

Acquisition

Design


Construction \$5,400,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>		
Project ID:	Pro-10910	
Project:	Valves Services and Meter Replacements - SAWS - 2022	
Programmed Amount:	\$17,476,000	
Core Business:	Water Delivery	
Category:	WD - Main Replacement	
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	\$17,000,000	(2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>		

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>		
Project ID:	Pro-11619	
Project:	Woodlawn Lake Water Main Replacement	
Programmed Amount:	\$1,517,410	
Core Business:	Water Delivery	
Category:	WD - Main Replacement	
Phase:	Construction	
Council District:	District 07	
Description and Scope:		
<p>This project will replace approximately one mile of 8-inch diameter pipe of water mains installed by open cut. These water mains are in a neighborhood between Bandera Rd. and N. General McMullen in northwest San Antonio, just west of Woodlawn Lake. By completing this project, the area will have a significant improvement in the level of service regarding main failures.</p>		
Justification:		
<p>The purpose of this project is to replace deteriorating water mains that have a high probability of failure and are near the end of their useful life. The mains are made of Cast Iron pipe and have an average age of 64 years old and have a history of approximately 43 water main failure work orders and approximately 9 service line failure work orders over the past 10 years. A desktop condition and risk assessment was performed for this area and indicated the water mains along the alley that touches near Culebra Road as the highest priority for replacement in the next 5 years as it has a risk score of 15 out of a maximum of 25 points.</p>		
Funding Information		
Acquisition		
Design	\$242,644	(2021)
Construction	\$1,476,080	(2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>		

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11471
Project: Indian Hills 2.5 MG Elevated Storage Tank
Programmed Amount: \$719,600
Core Business: Water Delivery
Category: WD - Production
Phase: Design
Council District: OCL



Description and Scope:

This project will design the construction of a 2.5 million gallon elevated composite water storage tank including piping, fencing, pavement, SCADA controls, electrical and security features. The tank will also connect to the existing Indian Hills Booster Pump Station in order to meet TCEQ requirements.

Justification:


The 2017 Water Master Plan indicates pressure zone (PZ) 1400W does not meet TCEQ elevated storage requirements. To overcome this deficit, a new 2.5 elevated storage tank is recommended. In addition, the project will alleviate areas of low pressure in the northern part of the pressure zone observed in existing system modeling, and it will supply storage for the existing Indian Hills Booster PS.

Funding Information

Acquisition		(2021)
Design	\$700,000	(2022)
Construction	\$7,000,000	(2024)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW		
Project ID:	Pro-00413	
Project:	King Street Pump Station Rehabilitation and New Well #6	
Programmed Amount:	\$18,941,467	
Core Business:	Water Delivery	
Category:	WD - Production	
Phase:	Construction	
Council District:	District 04	
Description and Scope:		
<p>King Street Pump Station is a former Bexar-Met primary pump station. This pump station includes 3 wells, 3 high service pumps, and a 500,000 gallon ground storage tank. This project will be performed as a part of the San Antonio Water System's continued work to improve and upgrade former Bexar-Met Water Production Facilities. The scope of this project includes the evaluation and replacement of the well pumps, high service pumps, electrical and communication equipment. The scope will also include any necessary site improvements such as grading, fencing, lighting, pavement, security, and yard piping. This project will also drill an additional production well #6 at the King St. pump station. This will include drilling, construction, developing, and testing of the well and the installation of a well pump, motor, well appurtenances, electrical, SCADA, collection piping and drainage piping.</p>		
Justification:		
<p>King Street Pump Station's mechanical and electrical components are aging and difficult to operate. These components need to be upgraded to improve the reliability and efficiency of the operation of this pump station. All of the existing water wells located at the King St. pump station are over 60 years old and prone to failures. The additional well will provide redundancy should any of the existing wells fail. A new well is required to maintain current pump capacity. Additional production wells are required at this pump station to adequately deliver water to the customers in the future. Installation of the new production well will help meet peak water demand.</p>		
Funding Information		
Acquisition		
Design	\$1,295,679	(2020)
Construction	\$18,425,552	(2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>		

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>		
Project ID:	Pro-11469	
Project:	Lorimor 3.0 MG Elevated Storage Tank	
Programmed Amount:	\$514,000	
Core Business:	Water Delivery	
Category:	WD - Production	
Phase:	Acquisition	
Council District:	District 09	
Description and Scope:		
<p>This project will fund land acquisition costs for the new tank. Future years will fund the design and construction of a new 3.0 MG elevated storage tank in Pressure Zone 1295, north of 1604 in the Stone Oak area, as recommended by the SAWS Water Master Plan. Design is in 2023 and construction in 2025.</p>		
Justification:		
<p>Pressure Zone 1295 has a single elevated storage tank and it is in poor condition. The existing tank has received notices of violation from TCEQ since it cannot be taken out of service. The construction of a second tank will allow SAWS operational flexibility in case there is a need to take a tank out of service for maintenance or repairs.</p>		
Funding Information		
Acquisition	\$500,000	(2022)
Design	\$650,000	(2023)
Construction	\$7,609,300	(2025)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>		

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11516
Project: Market Street Pump Station Disinfection System Upgrades
Programmed Amount: \$2,706,056
Core Business: Water Delivery
Category: WD - Production
Phase: Construction
Council District: District 01



Description and Scope:

The scope of this project includes the complete replacement of the disinfection system with either bulk sodium hypochlorite or 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, the project will also 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	\$392,000	(2021)
Construction	\$2,632,350	(2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11349
Project: Mission Pump Station Additional Well #9
Programmed Amount: \$6,065,200
Core Business: Water Delivery
Category: WD - Production
Phase: Construction
Council District: District 03



Description and Scope:

The Mission pump station is one of the main pump stations for SAWS system. This project will install an additional production well at the Mission pump station. It includes drilling, construction, developing, and testing of the well and the installation of a well pump, motor, well appurtenances, electrical, SCADA, collection piping and drainage piping. The project also includes the plugging of Well Nos. 3 and 5.

Justification:

Two of the existing well casings are compromised and a new well is required to maintain current pump capacity. Additional production wells are required at this pump station to adequately deliver water to the customers in the future. Installation of the new production well will help meet peak water demand.

Funding Information

Acquisition

Design	\$601,151	(2020)
Construction	\$5,900,000	(2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11648
Project: Nacogdoches Pump Station Valve and Pipe Replacement
Programmed Amount: \$343,866
Core Business: Water Delivery
Category: WD - Production
Phase: Design
Council District: District 10



Description and Scope:

This project will replace several large diameter valves (36-inch to 60-inch) at the Naco Pump Station. It will also conduct a condition assessment of up to 6000 ft. of water of mains and replace about 1700 ft. of 20-inch to 60-inch CSC and steel mains.

Justification:

The valve gearing has broken on several valves and parts are no longer available from the manufacturer. Parts have to be borrowed from other valves to turn broken ones. This requires multiple excavations down to the valve gear boxes to turn a single broken valve. The valves to be replaced were all installed under the same project. Condition assessment technology was deployed in 2019 to determine the condition of these pipelines, and interior corrosion was found throughout the pipelines that were inspected. It was also determined that the cathodic protection throughout the station has not been functioning for some time.

Funding Information

Acquisition

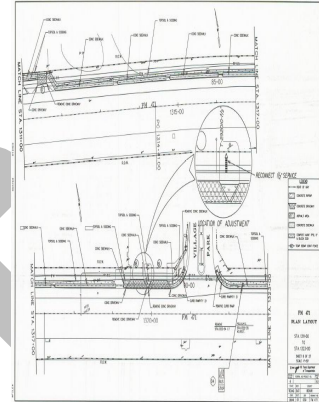
Design	\$334,500	(2022)
Construction	\$1,563,330	(2024)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10912
Project: Production Facilities Engineering Work Order Contract 2022
Programmed Amount: \$1,028,000
Core Business: Water Delivery
Category: WD - Production
Phase: Design
Council District: System Wide



Description and Scope:

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:

- 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

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.

Justification:

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.

Funding Information

Acquisition

Design \$1,000,000 (2022)

Construction

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11743
Project: Pump Station Generators and Resiliency Measures
Programmed Amount: \$25,288,800
Core Business: Water Delivery
Category: WD - Production
Phase: Acquisition/Design/Construction
Council District: System Wide



Description and Scope:

Acquire land, design, and installation of backup generators at selected pump stations.

Justification:

Compliance with Senate Bill 3. Harden the pump stations and associated infrastructure against winter storms and natural disasters. Acquisition and Design of the improvements necessary to harden the Turtle Creek, Wurzbach and Nacogdoches pump stations. Construction of the improvements necessary to increase the resiliency of the Mission, Marbach and Artesia pump stations.

Funding Information

Acquisition	\$3,360,000	(2022)
Design	\$5,040,000	(2022)
Construction	\$16,200,000	(2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11479
Project: Pump Station Rehabilitation Phase 14 - Inwood Pump Station
Programmed Amount: \$822,400
Core Business: Water Delivery
Category: WD - Production
Phase: Design
Council District: District 09



Description and Scope:

This project, Phase 14 of the multi-year program pump station rehabilitation program, will design the replacement of aging, obsolete and unserviceable medium voltage electrical and control equipment, components, and related infrastructure. All primary medium voltage switchgear, the motor control center, associated high service pump controls, duct banks and related infrastructure require replacement. The project includes the construction of a new electrical building and significant drainage and grading improvements.

Justification:

This primary pump station was built in 1991 and all electrical gear is original, and at over 30 years old it has exceeded the 20-25 year life expectancy for electrical equipment. Existing vaults and hand-holds are unsafe and generally in violation of current electrical and safety codes. Furthermore, the equipment has reached a level of obsolescence that not only makes it unreliable but replacement parts and components are becoming increasingly difficult to obtain, resulting in extended equipment outages.

Funding Information

Acquisition


Design	\$800,000	(2022)
Construction	\$6,000,000	(2024)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<p><u>PROJECT OVERVIEW</u></p> <p>Project ID: Pro-11258</p> <p>Project: Ranch Town No. 2 Pump Station Improvements</p> <p>Programmed Amount: \$5,242,800</p> <p>Core Business: Water Delivery</p> <p>Category: WD - Production</p> <p>Phase: Construction</p> <p>Council District: OCL</p>											
<p>Description and Scope:</p> <p>This project will primarily focus on electrical equipment on the site including switchgear, controls, wiring and conduit, and the addition of a generator. The project will also include any necessary site improvements such as grading, fencing, lighting, pavement, security, and yard piping.</p> <p>Justification:</p> <p>Ranch Town #2 pump station is a former Bexar Met facility that was constructed in 1979. A majority of the electrical components of this pump station have exceeded their life expectancy. To improve the reliability and efficiency of the pump station, electrical components of the pump station need to be replaced.</p>											
<p>Funding Information</p> <table border="0"> <tr> <td colspan="3">Acquisition</td> </tr> <tr> <td>Design</td> <td>\$708,396</td> <td>(2020)</td> </tr> <tr> <td>Construction</td> <td>\$5,100,000</td> <td>(2022)</td> </tr> </table> <p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>			Acquisition			Design	\$708,396	(2020)	Construction	\$5,100,000	(2022)
Acquisition											
Design	\$708,396	(2020)									
Construction	\$5,100,000	(2022)									

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<p><u>PROJECT OVERVIEW</u></p> <p>Project ID: Pro-11470</p> <p>Project: Rhoda 2.5 MG Elevated Storage Tank</p> <p>Programmed Amount: \$719,600</p> <p>Core Business: Water Delivery</p> <p>Category: WD - Production</p> <p>Phase: Design</p> <p>Council District: District 04</p>								
<p>Description and Scope:</p> <p>This project will design the construction of a 2.5 million gallon elevated composite water storage tank near S. Zarzamora and Gillette Blvd. The project will install piping, fencing, pavement, SCADA controls, electrical and security features. It will include the demolition of the existing 3.0 million gallon Rhoda Standpipe. This project was formerly called the Verano tank.</p> <p>Justification:</p> <p>The 2017 Water Master Plan indicates pressure zone (PZ) 790 does not meet TCEQ elevated storage requirements. To overcome this deficit, and to deal with aging infrastructure, a new 2.5 elevated storage tank is recommended. In addition, the project also includes the decommissioning of the existing Rhoda Standpipe.</p>								
<p>Funding Information</p> <p>Acquisition</p> <table border="0"> <tr> <td>Design</td> <td>\$700,000</td> <td>(2022)</td> </tr> <tr> <td>Construction</td> <td>\$7,000,000</td> <td>(2024)</td> </tr> </table> <p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>			Design	\$700,000	(2022)	Construction	\$7,000,000	(2024)
Design	\$700,000	(2022)						
Construction	\$7,000,000	(2024)						

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11649
Project: Sunset & Evans Tank Altitude Valve Replacement
Programmed Amount: \$1,233,600
Core Business: Water Delivery
Category: WD - Production
Phase: Design
Council District: District 07, District 09



Description and Scope:

This project will replace the existing 24-inch altitude valves located at the Sunset and Evans pump stations. This project will also include the installation of bi-directional flow meters to measure the flow going in and out of the tanks.

Justification:

At Sunset the valve is so undersized that it restricts the flow required during high demand in summer time. At Evans the existing altitude valve is not the appropriate type and there are issues associated with the valve.

Funding Information

Acquisition

Design

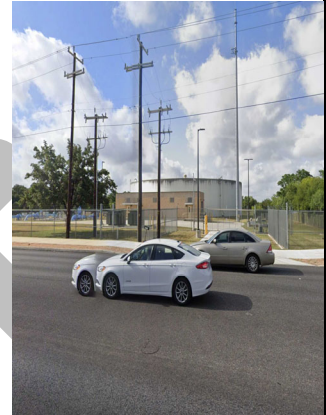
Construction \$1,200,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10991
Project: University Pump Station Additional 5MG Ground Storage Tank
Programmed Amount: \$7,196,000
Core Business: Water Delivery
Category: WD - Production
Phase: Construction
Council District: District 08



Description and Scope:

Construct an additional 5 million gallon pre-stressed concrete ground storage tank to meet growth in the area. The project includes the tank, overflow structure, drainage piping, tank inlet and outlet piping, valves, grading, fencing, and heritage tree relocation, as well as site security, miscellaneous electrical and instrumentation and control systems upgrades.

Justification:

Due to high growth in the northwest part of San Antonio, the University Pump Station (PS) isn't able to keep up with water demands as the existing tank cannot replenish fast enough. The University PS takes suction from adjacent reservoirs which are supplied from Pressure Zone (PZ) 1111 and boosts water to PZ 1170. Also, the existing University Tank is filled through pressure sustaining valves, primarily from the western portion of PZ 1111. Pressure sustaining valves have to be manually adjusted by Operators in order to fill other tanks. The drain rate of the existing University Tank is significant during peak demand which impact the operation of the elevated storage tanks in PZ 1111. The new University Tank will allow effective transfer of water from PZ 1111 to 1170, especially under maximum hour demand conditions when the existing tank experiences excessive drain rates.

Funding Information

Acquisition

Design

Construction \$7,000,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11467
Project: University Tank #1 Replacement
Programmed Amount: \$699,040
Core Business: Water Delivery
Category: WD - Production
Phase: Design
Council District: District 08



Description and Scope:

The University Pump Station is located on the City of San Antonio's northwest side near UTSA. The project consists of the demolition of a 5 million gallon welded steel ground storage tank and vault structure, and the construction of a new 5 million gallon pre-stressed concrete ground storage tank, overflow structure, tank inlet and outlet piping, valves, and grading. The project also includes miscellaneous electrical and instrumentation and controls system work.

Justification:

SAWS has determined the existing 5 million gallon welded steel tank has reached its useful life, and must be replaced in order to comply with Texas Commission on Environmental Quality (TCEQ) requirements, and American Water Works Association (AWWA) and Occupational Safety & Health Administration (OSHA) standards. The current tank is considered structurally deficient due to internal corrosion. The replacement of the tank is considered a proactive approach, which will allow SAWS to save cost for the repair and rehabilitation in the future.

Funding Information

Acquisition

Design \$680,000 (2022)

Construction \$6,000,000 (2024)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11446

Project: Water Production Facilities Electrical Upgrades - Tippecanoe, Bear Creek, Bear Springs

Programmed Amount: \$3,391,475

Core Business: Water Delivery

Category: WD - Production

Phase: Construction

Council District: District 04, OCL



Description and Scope:

This is 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. This project will provide upgrades to the pump starters and panels, replace the electrical switch gear, motor control centers, Supervisory Control and Data Acquisition (SCADA) equipment, security and communication systems, and perform miscellaneous civil site improvements such as fencing, grading, and access driveways.

Justification:

The Bear Creek, Bear Springs, and Tippecanoe Pump Stations serve customers in the southwest area of the City of San Antonio, in pressure zone 994. The existing electrical systems at these pump stations have reached the end of their useful life, and are in need of replacement. The replacement is required to ensure the reliability, efficiency and long-term operation of the pump stations.

Funding Information

Acquisition

Design \$860,976 (2021)

Construction \$3,299,100 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11468
Project: Wurzbach Tank #1 Replacement
Programmed Amount: \$699,040
Core Business: Water Delivery
Category: WD - Production
Phase: Design
Council District: OCL



Description and Scope:

The Wurzbach Pump Station is located on Wurzbach Rd. on the City of San Antonio's northwest side. The project consists of the demolition of a 5 million gallon welded steel ground storage tank and vault structure, and the construction of a new 5 million gallon pre-stressed concrete ground storage tank, overflow structure, tank inlet and outlet piping, valves, and grading. The project also includes miscellaneous electrical and instrumentation and controls system work.

Justification:

SAWS has determined the existing 5 million gallon welded steel tank has reached its useful life, and must be replaced in order to comply with Texas Commission on Environmental Quality (TCEQ) requirements, and American Water Works Association (AWWA) and Occupational Safety & Health Administration (OSHA) standards. The current tank is considered structurally deficient due to internal corrosion. The replacement of the tank is considered a proactive approach, which will allow SAWS to save cost for the repair and rehabilitation in the future.

Funding Information

Acquisition

Design	\$680,000	(2022)
Construction	\$6,000,000	(2024)

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

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**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<p>PROJECT OVERVIEW</p> <p>Project ID: Pro-11651</p> <p>Project: CPMS Upgrades Phase 3</p> <p>Programmed Amount: \$102,800</p> <p>Core Business: Wastewater</p> <p>Category: WW - Corporate</p> <p>Phase: Acquisition</p> <p>Council District: System Wide</p>		
<p>Description and Scope:</p> <p>In 2015, SAWS implemented the Contracts and Project Management System (CPMS). The CPMS manages the full lifecycle of CIP (solicitation, selection, contract execution, invoicing, change orders/amendments) and project management (Master Planning, Project Ranking and Budget Management).</p> <p>Phase 3 expanded CPMS to allow for Engineering O&M contract and O&M project to utilize CPMS. This is all new functionality to be added to the system done by the Vendor and we are adding and moving more departments to use CPMS.</p> <p>Justification: The next Phase of changes will include:</p> <ul style="list-style-type: none"> -Governmental MOU contracts -Enhancement to the system because of Engineering business process improvements -Enhancement to the system because of D&C business process improvements -Other SAWS departments to start utilizing CPMS 		
<p>Funding Information</p> <p>Acquisition</p> <p>Design \$100,000 (2022)</p> <p>Construction</p> <p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>		

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10898
Project: General Legal Services - WW - 2022
Programmed Amount: \$436,900
Core Business: Wastewater
Category: WW - Corporate
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 \$425,000 (2022)

Design

Construction

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10901
Project: Wastewater OCCC 2022
Programmed Amount: \$14,203,596
Core Business: Wastewater
Category: WW - Corporate
Phase: Construction
Council District: System Wide



Description and Scope:

The Owner Controlled Construction Changes (OCCC) fund was established to improve monitoring and efficiency of construction 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:

Changes that occur on construction projects must be approved by SAWS Board of Trustees if over \$100,000.

Funding Information

Acquisition

Design

Construction \$13,816,728 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11480
Project: Wastewater Overhead 2022
Programmed Amount: \$12,125,000
Core Business: Wastewater
Category: WW - Corporate
Phase: Construction
Council District: System Wide



Description and Scope:

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 2021 and prior year CIP projects and the future 2022 CIP projects.

Justification:

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.

Funding Information

Acquisition

Design

Construction \$12,125,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11703
Project: Six Mile Creek Odor Control
Programmed Amount: \$1,028,000
Core Business: Wastewater
Category: WW - Collection Facilities
Phase: Construction
Council District: District 03



Description and Scope:

This project will construct an odor control system at Six Mile Creek near Apollo Street and Rilling Road. The project will include biotower media, a fan and carbon vessel, high capacity hydrogen sulfide (H2S) and an irrigation system, along with gauges and FRP dampers. It does not include electrical improvements and water utility improvements that may be necessary.

Justification:

Reduce odors and addresses citizen concerns in the surrounding area.

Funding Information

Acquisition

Design

Construction \$1,000,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11350
Project: Classen Steubing New Bore Alignment
Programmed Amount: \$2,261,600
Core Business: Wastewater
Category: WW - Mains New
Phase: Construction
Council District: District 09



Description and Scope:

The Project will install new 8-inch and 30-inch sewer mains in the vicinity of Hardy Oak and U.S. Highway 281 and decommission Lift Station #150 and Lift Station #191. A portion of this project will involve tunneling beneath an existing earthen dam. This will increase the capacity of the system in this area and enable the elimination of two lift stations.

Justification:

The project will complete the gravity main necessary to eliminate LS#150 and 191 thereby avoiding future rehabilitation and maintenance cost of those lift stations.

Funding Information

Acquisition

Design

Construction \$2,200,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10902
Project: Sewer Main Oversizing 2022 - SAWS
Programmed Amount: \$11,102,400
Core Business: Wastewater
Category: WW - Mains New
Phase: Construction
Council District: System Wide



Description and Scope:

Pay 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.

Justification:

Participating in oversizing is a cost effective way to meet the needs of growth. It is funded by impact fees collected from new development.

Funding Information

Acquisition

Design

Construction \$10,800,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-00235
Project: Governmental Sewer - 2022
Programmed Amount: \$25,700,000
Core Business: Wastewater
Category: WW - 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.

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 \$25,000,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11297

Project: Capacity, Management, Operation and Maintenance (CMOM) 2022

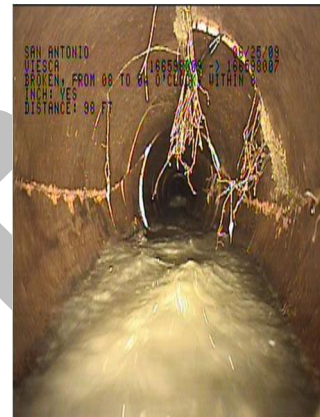
Programmed Amount: \$12,850,000

Core Business: Wastewater

Category: WW - Main Replacement

Phase: Construction

Council District: System Wide



Description and Scope:

Funding is requested in the amount of \$12.5 million dollars for 2022 for wastewater work resulting from urgent/emergency CMOM assets. The mains identified are in Very Poor Condition and fall outside of the specified Remedial Measures work for the Consent Decree.

Justification:

Sewer mains in poor and very poor condition are currently part of the CMOM program under monitoring. The condition of these assets will continue to degrade over time and may reach urgent or emergency status requiring expedited design and construction to ensure the protection of public health and safety.

Funding Information

Acquisition

Design


Construction \$12,500,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>		
Project ID:	Pro-10916	
Project:	Main Replacements - Sewer - SAWS Crews - 2022	
Programmed Amount:	\$3,598,000	
Core Business:	Wastewater	
Category:	WW - Main Replacement	
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	(2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>		

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>		
Project ID:	Pro-10919	
Project:	Sewer Laterals - 2022	
Programmed Amount:	\$5,448,400	
Core Business:	Wastewater	
Category:	WW - Main Replacement	
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	(2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>		

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-00260
Project: Small and Large Diameter Condition Remedial Measures 2022
Programmed Amount: \$15,831,200
Core Business: Wastewater
Category: WW - Main Replacement
Phase: Construction
Council District: System Wide



Description and Scope:

This project will fund the rehabilitation of the final packages of the Condition Remedial Measures Plan that have been identified by televised inspection to be in very poor condition. The 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.

Justification:

Rehabilitation of the sewer system is required by the EPA Consent Decree.

Funding Information

Acquisition

Design

Construction \$15,400,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-00395

Project: W-52 Culebra Creek Sewer Capacity Relief, south of Grissom Road

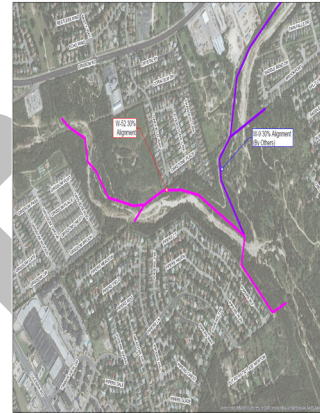
Programmed Amount: \$1,680,780

Core Business: Wastewater

Category: WW - Main Replacement

Phase: Design

Council District: District 06



Description and Scope:

The existing nine-tenths of a mile of 30-inch and 33-inch diameter sewer mains south of Old Grissom Road, within Culebra Creek, is undersized until it connects to the existing 60-inch-diameter pipe south of where Culebra Creek and Leon Creek intersect. The W-52 Culebra Creek Sewer project will design the replacement of the existing pipe with 36-inch, 42-inch, and 60-inch pipe and reduce the likelihood of sanitary sewer overflows (SSOs) within the W-52 Culebra Creek Sewer Capacity Constraint Area. Construction is planned for 2024.

Justification:

The W-52 Culebra Creek Sewer project will resolve the undersizing issue and reduce the likelihood of sanitary sewer overflows (SSOs) within the W-52 Culebra Creek Sewer Capacity Constraint Area.

Funding Information

Acquisition	\$75,000	(2022)
Design	\$1,560,000	(2022)
Construction	\$10,400,000	(2024)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-00280

Project: W-9 Upper Leon Creek Sewer Capacity Storage and Relief, Culebra Creek to Whitby Road

Programmed Amount: \$6,743,680

Core Business: Wastewater

Category: WW - Main Replacement

Phase: Design

Council District: District 06, District 07



Description and Scope:

The W-9 Upper Leon Creek Capacity Constraint Area will be constructed in northwest San Antonio and consist of approximately 4.1 miles of 42-inch and 48-inch-diameter sewer pipe, and approximately one-quarter mile of 8-inch, 12-inch and 27-inch diameter sanitary sewer pipe and related structures. The project will start design in 2022 and construction is planned for 2024. The W-9 project begins at the W-52 capacity constraint project at the confluence of Leon Creek and Culebra Creek. Construction will proceed upstream across Grissom and Bandera roads to the connection with the existing sewer system approximately three-quarters of a mile northeast of Bandera Road. The proposed improvements are aligned along Leon Creek stream banks and the City of San Antonio Leon Creek Greenway Park hike and bike trails.

Justification:

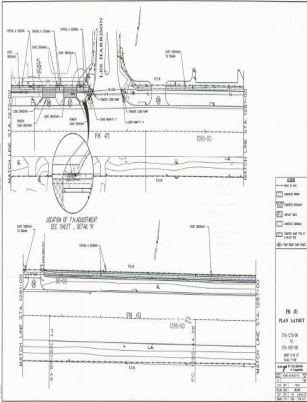
The W-9 Upper Leon Creek Capacity Constraint Area was identified as a capacity constraint project that will improve sanitary sewer system capacity, abandon Condition D and E pipeline segments, and relocate the alignment in order to reduce sanitary sewer overflows.

Funding Information

Acquisition	\$205,600	(2022)
Design	\$6,538,080	(2022)
Construction	\$63,600,000	(2024)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>		
Project ID:	Pro-10918	
Project:	Wastewater Main Replacement Work Order Engineering Contract - 2022	
Programmed Amount:	\$5,756,800	
Core Business:	Wastewater	
Category:	WW - Main Replacement - Sewer	
Phase:	Design	
Council District:	System Wide	
Description and Scope:		
<p>This annual project will fund design services to repair/replace sewer mains that have experienced or will experience 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 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 as part of the CMOM program.</p>		
Justification:		
<p>Design of replacement/repair mains is necessary to restore and maintain wastewater service.</p>		
Funding Information		
Acquisition		
Design	\$5,600,000	(2022)
Construction		
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>		

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-00404
Project: Medio Creek WRC Plant 1 Improvements
Programmed Amount: \$1,542,000
Core Business: Wastewater
Category: WW - Treatment
Phase: Design
Council District: District 04



Description and Scope:

Plant 1 at the Medio Creek WRC is in need of rehabilitation, replacement and upgrades. This project will evaluate the condition of headworks, oxidation ditches/final clarifiers, filters and UV disinfection systems, and will design repairs to the structures, replacement of equipment and upgrades to the electrical and instrumentation and control systems.

Justification:

Plant 1 was constructed in the early 1980s. Much of the structures and equipment have approached the end of their useful life and are in need of repair, replacement and upgrading.

Funding Information

Acquisition

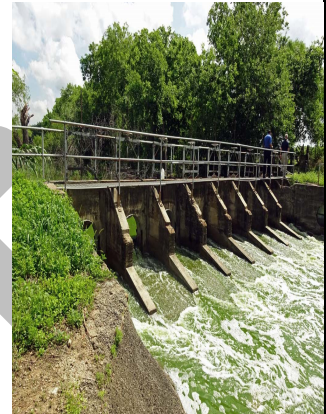
Design	\$1,500,000	(2022)
Construction	\$15,000,000	(2024)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11252
Project: Mitchell Lake Dam and Spillway
Programmed Amount: \$71,960,000
Core Business: Wastewater
Category: WW - Treatment
Phase: Construction
Council District: District 03



Description and Scope:

The Mitchell Lake dam and spillway were originally constructed in 1901 and underwent various improvements and reconstructions in 1932, 1940, and 1948. SAWS plans to establish a new spillway elevation of 521.7' above mean sea level (msl) and a minimum operating level of 518.5' msl. Spillway and dam improvements will be designed to meet requirements of a high hazard classification, such that the 100-Year Peak Water Surface Elevation will be 524.2' msl and the 80% Probable Maximum Flood Peak Water Surface Elevation will be 528.0' msl. Under normal operating conditions a continuous discharge of between 2-10 million gallons per day will be made to a downstream constructed wetlands.

Justification:

In February of 2019 SAWS received an Administrative Order from the U.S. Environmental Protection Agency with a Schedule of Activities that requires building a constructed wetland below Mitchell Lake to achieve compliance with permitted effluent limitations. The project will require improvements to the existing dam structure and replacement of the existing spillway to enable variable water level and flow controls to the constructed wetland.

The USEPA Administrative Order requires completion of all aspects of the constructed wetland by September 20, 2024.

Funding Information

Acquisition

Design	\$6,682,000	(2020)
Construction	\$70,000,000	(2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11650

Project: Steven M. Clouse Biosolids Dewatering and Conveying Systems Upgrades

Programmed Amount: \$1,644,800

Core Business: Wastewater

Category: WW - Treatment

Phase: Design

Council District: District 03



Description and Scope:

The existing Belt Filter Presses (BFPs) at the Dos Rios WRC are more than 30 years old, and at the end of their useful life. They were already refurbished twice in the past, and the instrumentation cabinets have become obsolete. The project will evaluate different dewatering and conveying equipment available in the current market, make recommendations to select the most suitable equipment in terms of cost, future biosolids handling plans and requirements, ease of integration and operability, and provide design and construction. The electrical and instrumentation and controls systems will also be upgraded. The project will also install additional thickening centrifuges. The project will assess housing all thickening and dewatering equipment in an enclosed building.

Justification:

Dewatering systems are needed in order to squeeze out the excess water from the digested solids to reduce the quantity to be hauled off. They are integral part of biosolids handling to save from hauling and landfilling costs. The existing dewatering and conveying equipment and associated electrical and instrumentation systems are more than 30 years old and show signs of significant deterioration and therefore are in need of replacement. Additional centrifuges are needed to meet the required thickening capacity.


Funding Information

Acquisition

Design	\$1,600,000	(2022)
Construction	\$16,000,000	(2023)

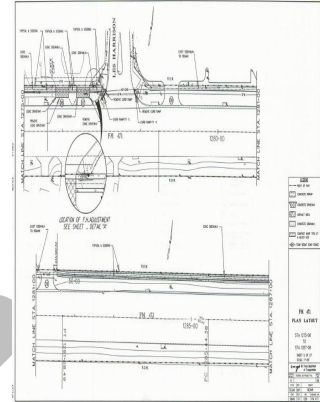
Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>		
Project ID:	Pro-10988	
Project:	Steven M. Clouse WRC Tertiary Filter Expansion	
Programmed Amount:	\$1,336,400	
Core Business:	Wastewater	
Category:	WW - Treatment	
Phase:	Design	
Council District:	District 03	
Description and Scope:		
<p>Ten existing cloth media filters at the Dos Rios WRC were installed in 2012 to replace a number of the original antiquated dual media sand filters. The project will design the installation of additional filters at the Clouse WRC. It will also include associated site/civil, mechanical, structural, electrical and instrumentation and controls work.</p>		
Justification:		
<p>There is a lack of redundancy on filters when one filter is out of service. Redundancy is specifically needed during wet weather flows. The filters also support the recycled water system at the plant.</p>		
Funding Information		
Acquisition		
Design	\$1,300,000	(2022)
Construction	\$13,000,000	(2023)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>		

PROJECT OVERVIEW

Project ID: Pro-10920
Project: Treatment Facilities Engineering Work Order Contract 2022
Programmed Amount: \$1,028,000
Core Business: Wastewater
Category: WW - Treatment
Phase: Design
Council District: System Wide



Description and Scope:

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.

Justification:

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.

Funding Information

Acquisition

Design \$1,000,000 (2022)

Construction

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

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WATER SUPPLY

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**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11685
Project: ASR Lime Silo Replacement
Programmed Amount: \$3,598,000
Core Business: Water Supply
Category: WR - ASR
Phase: Construction
Council District: OCL



Description and Scope:

The project consists of improvements to the Aquifer Storage and Recovery (ASR) lime storage system located at the H2Oaks Facility. Some of the improvements include the existing hydrated lime storage and feed system, restoration capability for automated operation through the plant SCADA system; replacement/repair drainage lines to solve the clogging issues; replacement of the raw water booster pumps to achieve the desired pressure for system flushing; slurry tank and associated piping and equipment; and evaluation of alternatives for enclosing the existing exterior equipment to provide protection from elements and extreme weather events.

Justification:

The existing lime storage facilities haven been malfunctioning for extended periods of time, which has caused intensive maintenance due to pipes clogging, water booster pump failures, leaks, insufficient water pressures which prevent the proper operation of the ASR facility.

Funding Information

Acquisition

Design

Construction \$3,500,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<p><u>PROJECT OVERVIEW</u></p> <p>Project ID: Pro-11683</p> <p>Project: ASR Pipeline Cathodic Protection</p> <p>Programmed Amount: \$308,400</p> <p>Core Business: Water Supply</p> <p>Category: WR - ASR</p> <p>Phase: Design</p> <p>Council District: OCL</p>										
<p>Description and Scope:</p> <p>The project includes corrosion protection engineering services related to approximately 2.8 miles of existing 60-inch and 10.9 miles of 42-inch diameter steel Aquifer Storage and Recovery (ASR) pipeline (Segments 4 , 5 and 6). The scope includes field investigations, design development, and support during the construction phase of the project related to the corrosion protection systems. As part of the field investigations, the consultant will collect structure-to-soil potential measurements in accordance with NACE corrosion protection requirements.</p> <p>Justification:</p> <p>The ASR pipeline is approaching 20 years of operation and is need of a new cathodic protection system due to depleted sacrificial anode system. Based on available test reports the total anode current output has been diminishing throughout the years which indicates significant failure rates that must be addressed. Otherwise, the anticipated remaining anode life will be less than three years.</p>										
<p>Funding Information</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="3">Acquisition</td> </tr> <tr> <td style="width: 20%;">Design</td> <td style="width: 40%;">\$300,000</td> <td style="width: 40%;">(2022)</td> </tr> <tr> <td>Construction</td> <td>\$3,000,000</td> <td>(2024)</td> </tr> </table> <p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>		Acquisition			Design	\$300,000	(2022)	Construction	\$3,000,000	(2024)
Acquisition										
Design	\$300,000	(2022)								
Construction	\$3,000,000	(2024)								

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>		
Project ID:	Pro-10811	
Project:	ConnectH2O Advanced Metering Infrastructure (AMI)	
Programmed Amount:	\$184,095,907	
Core Business:	Water Supply	
Category:	WR - Corporate	
Phase:	Construction	
Council District:	System Wide	
Description and Scope:		
<p>SAWS began its pilot phase of the ConnectH₂O Program in March 2021 and it will run until late 2021. Full system wide deployment is expected to run from 2022 – 2026 but will be subject to authorization from the SAWS Board of Trustees prior to moving forward. Fully implementing the AMI solution will have a significant impact on SAWS meter to cash process. It will greatly improve our ability to provide relevant and timely information to our customers about their water usage, likely reducing water usage as a result of leaks on the customer side of the meter and improve conservation efforts. Improved meter registration will also have a positive impact on Non-Revenue Water.</p>		
Justification:		
<p>A cost benefit analysis has been performed for the AMI solution. With exception of retrofitting all existing meters with AMI communication devices, all potential scenarios indicated that the program would be at least break even over the 20-year life. Conducting a pilot is critical to determining how the AMI solution will work and how SAWS will need to revise its existing business processes. We are evaluating the equipment, network and software necessary to successfully implement and operate the AMI solution system wide. The investment required for full deployment will run approximately \$200 million over a 20-year period and the pilot allows us to perform a proof of concept. The total capital cost associated with Phase 1 & 2, which includes the pilot is expected to be \$7.15 million.</p>		
Funding Information		
Acquisition		
Design		
Construction	\$184,095,907	(2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>		

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-10899
Project: General Legal Services - WR - 2022
Programmed Amount: \$64,250
Core Business: Water Supply
Category: WR - Corporate
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 \$62,500 (2022)

Design

Construction

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11511
Project: Water Supply OCCC 2022
Programmed Amount: \$1,461,121
Core Business: Water Supply
Category: WR - Corporate
Phase: Construction
Council District: System Wide



Description and Scope:

The Owner Controlled Construction Changes (OCCC) fund was established to improve monitoring and efficiency of construction 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:

Changes that occur on construction projects must be approved by SAWS Board of Trustees if over \$100,000.

Funding Information

Acquisition

Design

Construction \$1,421,324 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-00302
Project: Randolph Pump Station Improvements
Programmed Amount: \$22,922,344
Core Business: Water Supply
Category: WR - ASR
Phase: Construction
Council District: District 02



Description and Scope:

The scope consists of the replacement of high service pumps/motors, well pumps/ motors, control valves, motor operated valves, and miscellaneous piping; complete replacement of electrical gear including all existing low and medium voltage wiring, flow meters, and SCADA system; installation of a new electrical building and on-site generation sodium hypochlorite disinfection system/building; miscellaneous other improvements such as site grading, painting, new concrete driveway and parking area, site drainage improvements, security fence and gate, site security and lighting. Specialized construction inspections, commissioning and other construction phase services are included, as requested.

Justification:

The project will replace aging, obsolete, and unserviceable equipment, electrical gears and controls, and other infrastructure. This project is Phase 13 of the Pump Station Rehabilitation Program.

Funding Information

Acquisition

Design	\$1,305,560	(2020)
Construction	\$22,298,000	(2022)

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


**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>		
Project ID:	Pro-11454	
Project:	Governmental Adjustments - Recycled Water - 2022	
Programmed Amount:	\$205,600	
Core Business:	Water Supply	
Category:	RW - 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 COSA, Bexar County, CPS, 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	(2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>		

**SAN ANTONIO WATER SYSTEM
2022 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:	\$2,570,000	
Core Business:	Water Supply	
Category:	RW - Recycled Water	
Phase:	Construction	
Council District:	District 02	
Description and Scope:		
<p>The scope of this project includes the complete replacement of the existing disinfection 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>This project will increase the safety of the disinfection system.</p>		
Funding Information		
Acquisition		
Design		
Construction	\$2,500,000	(2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>		

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<p><u>PROJECT OVERVIEW</u></p> <p>Project ID: Pro-10922</p> <p>Project: Recycled Water Customer Lines - 2022</p> <p>Programmed Amount: \$205,600</p> <p>Core Business: Water Supply</p> <p>Category: RW - Recycled Water</p> <p>Phase: Construction</p> <p>Council District: System Wide</p>	
<p>Description and Scope: Provide recycled water to customers for irrigation, cooling towers, and industrial uses.</p> <p>Justification: Providing recycled water avoids the use of potable water sources.</p>	
<p>Funding Information</p> <p>Acquisition</p> <p>Design</p> <p>Construction \$200,000 (2022)</p> <p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11509
Project:	Recycled Water Overhead 2022
Programmed Amount:	\$200,000
Core Business:	Water Supply
Category:	RW - Recycled Water
Phase:	Construction
Council District:	System Wide
Description and Scope:	
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 2021 and prior year CIP projects and the future 2022 CIP projects.	
Justification:	
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.	
Funding Information	
Acquisition	
Design	
Construction	\$200,000 (2022)
Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.	



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CHILLED WATER

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**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>	
Project ID:	Pro-11508
Project:	Chilled Water Overhead 2022
Programmed Amount:	\$200,000
Core Business:	Chilled Water
Category:	CW - Chilled Water
Phase:	Construction
Council District:	System Wide
Description and Scope:	
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 2021 and prior year CIP projects and the future 2022 CIP projects.	
Justification:	
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.	
Funding Information	
Acquisition	
Design	
Construction	\$200,000 (2022)
Amounts shown are estimated costs excluding SAWS overhead, which is reported in a separate CIP project.	



**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11706
Project: Chiller Replacement – Commerce Street District Cooling Plant
Programmed Amount: \$2,467,200
Core Business: Chilled Water
Category: CW - Chilled Water
Phase: Construction
Council District: District 01



Description and Scope:

Remove the existing 26-year-old centrifugal chillers, chilled water pumps, condenser pumps and associated appurtenances and replace with new energy efficient centrifugal chillers with variable frequency drive (VFD) technology.

Justification:

There are five 2,000-ton centrifugal chillers and two 1,180-ton ice making chillers at the Commerce Street District Cooling Plant. The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) estimates the useful life of centrifugal chillers is 25 years. Four of these centrifugal chillers are out of commission and require replacement. The Commerce Street District Cooling Plant provides chilled water services to the Alamodome and the Henry B. Gonzalez Convention Center.

Funding Information

Acquisition

Design

Construction \$2,400,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11708
Project: District Cooling System – Plant Improvements
Programmed Amount: \$2,097,120
Core Business: Chilled Water
Category: CW - Chilled Water
Phase: Construction
Council District: District 01, OCL



Description and Scope:

These plant improvements address the mechanical deficiencies within SAWS' chilled water pumps, glycol pumps, condenser pumps, electric motors, cooling tower gear boxes and fan blades. This project will also address heat exchangers and the thermal storage system. Energy efficiency improvements like variable frequency drives (VFD) will be integrated into the DCS plants to meet The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) code of industry standards. The planned amounts per plant are as follows:

- Commerce Street DC Plant - \$910,000
- Cherry Street DC Plant - \$270,000
- Port SA Bldg. 356 DC Plant - \$560,000
- Port SA Bldg. 1625 DC Plant - \$300,000

Justification:

This project will ensure that all District Cooling System (DCS) mechanical infrastructure components operate within their life expectancy established by ASHRAE. New technologies to improve energy efficiencies will be included to reduce energy costs.

Funding Information

Acquisition

Design

Construction \$2,040,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW

Project ID: Pro-11736
Project: Chilled Water OCCC
Programmed Amount: \$131,584
Core Business: Chilled Water
Category: CW - Chilled Water
Phase: Construction
Council District: System Wide



Description and Scope:

The Owner Controlled Construction Changes (OCCC) fund was established to improve monitoring and efficiency of construction 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:

Changes that occur on construction projects must be approved by SAWS Board of Trustees if over \$100,000.

Funding Information

Acquisition

Design

Construction \$128,000 (2022)

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

**SAN ANTONIO WATER SYSTEM
2022 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>		
Project ID:	Pro-11707	
Project:	Replace Plant Piping at Commerce Street District Cooling Plant	
Programmed Amount:	\$1,028,000	
Core Business:	Chilled Water	
Category:	CW - Chilled Water	
Phase:	Construction	
Council District:	District 01	
Description and Scope:		
<p>Replace the existing 53-year-old 30-inch common header chilled water piping, isolations valves, suction strainers, cooling tower and condenser piping.</p>		
Justification:		
<p>There are eight 200 Horsepower Condenser Water Pumps and six Cooling Tower Cells that are all connected to this common header for proper heat transfer from the chillers to the cooling towers. All chilled water piping from the cooling tower cells to the common header have extensive corrosion pigmentation which is one of the most destructive forms of corrosion. Pitting occurs when anodic and cathodic sites become stationary due to large differences in surface conditions.</p>		
Funding Information		
Acquisition		
Design		
Construction	\$1,000,000	(2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported in 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 proposed for implementation in 2022.

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 proposed for implementation in 2022.

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

Discount *	INSIDE CITY LIMITS	OUTSIDE CITY LIMITS
	Approved	Approved
	2020	2020
	\$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 proposed for implementation in 2022.

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
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. No changes to these discounts have been proposed for implementation in 2022.

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 \$5,600 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 proposed for implementation in 2022.

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 proposed for implementation in 2022.

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 proposed for implementation in 2022.

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

	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 2022 will be evaluated at the end of 2021.

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
2021	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 2022 will be evaluated at the end of 2021.

2021 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. No changes to these rates have been proposed for implementation in 2022.

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
	RATE PER 100 GALLONS	RATE PER 100 GALLONS
Usage in 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/Acre-Feet	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.
ConnectH2O	Advanced Metering Infrastructure (AMI) project
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/Delta Variant	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.
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 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

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