

## CAPITAL IMPROVEMENT PROGRAM

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

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

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

2021 Capital Improvement Plan	
Core Business Area	2021 Funding
Water Delivery	\$ 182,391,576
Wastewater	325,942,794
Water Supply	32,891,260
Chilled Water	125,000
<b>Total</b>	<b>\$ 541,350,630</b>

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

### Water Supply

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

### Water Delivery

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

### Wastewater

The 2021 Wastewater program totals \$326 million. Most of the 2021 Wastewater program, \$157.8 million or 48.4%, focuses on the rehabilitation and replacement of wastewater mains identified through the SAWS Sanitary Sewer Overflow Reduction Program (SSORP). These projects have been prioritized and scheduled to meet the requirements of SAWS Consent Decree with the federal government. The single largest of the SSORP projects in

2021 is the Small and Large Diameter Condition Remedial Measures project at a cost of \$64.8 million. This project will fund the rehabilitation of approximately 25 miles of small and 6.5 miles of large diameter sewer mains that have been identified by televised inspection to be in very poor condition.

### **SIGNIFICANT NON-ROUTINE CAPITAL EXPENDITURES**

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

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

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

## 2021 CAPITAL IMPROVEMENT PLAN SUMMARY

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

<sup>1</sup> Includes 2.8% projected inflation

## 2021 CAPITAL IMPROVEMENT PLAN SUMMARY

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

<sup>1</sup> Includes 2.8% projected inflation

## 2021 CAPITAL IMPROVEMENT PLAN SUMMARY

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

<sup>1</sup> Includes 2.8% projected inflation

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## **CIP PROJECT DATA**

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# WATER DELIVERY

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

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

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

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

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

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

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

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

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

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

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

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



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

**PROJECT OVERVIEW**

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

**Description and Scope:**

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

**Justification:**

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

**Funding Information:**

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

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

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

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

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

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

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

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

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

<b>PROJECT OVERVIEW</b>	
<b>Project ID:</b>	Pro-11449
<b>Project:</b>	Project 3: IH10 PZ1400 Water Main - Phase A
<b>Programmed Amount:</b>	\$1,696,200
<b>Core Business:</b>	WD - Water Delivery
<b>Category:</b>	Mains New - Water
<b>Phase:</b>	Design
<b>Council District:</b>	District 08
<b>Description and Scope:</b>	
<p>Design work associated with Master Plan Project 3 along the IH-10 corridor. Modeling suggests the upper section of this project will likely make more significant improvements to the pressure status in the northern reach of Pressure Zone 1400W. The current plan is to upsize the existing 20" main to a 36" main along the eastern right-of-way of Interstate Highway (IH)-10 from the intersection of Heuermann and IH-10 to the intersection of Boerne Stage Rd. and IH-10. Phase B will be constructed in 2024.</p>	
<b>Justification:</b>	
<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>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	\$1,650,000 (2021)
<b>Construction:</b>	\$16,500,000 (2023)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

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

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

**SAN ANTONIO WATER SYSTEM  
2021 CAPITAL IMPROVEMENT PROGRAM  
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<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-11346
<b>Project:</b>	PZ1111 24-inch Transmission Main
<b>Programmed Amount:</b>	\$2,669,549
<b>Core Business:</b>	WD - Water Delivery
<b>Category:</b>	Mains New - Water
<b>Phase:</b>	Design
<b>Council District:</b>	District 08, District 09
<b>Description and Scope:</b>	
<p>This project consists of approximately 1.8 miles of 24-inch water main along Wurzbach Parkway between Blanco and Lockhill-Selma and approximately 1.4 miles of 24-inch water main along Lockhill-Selma between Wurzbach Pkwy and Huebner. This project is required to improve transmission efficiency between the Bitters booster station and the projected DeZavala elevated tank, as well as within PZ 1111. Moving from PZ 7 to PZ 8 requires constructing approximately 1,000 feet of 8-inch distribution main within Park Forest Subdivision and 700 feet of 12-inch distribution main along Lockhill Selma from just north of Huebner to Queens Forest.</p>	
<b>Justification:</b>	
<p>This project is required to improve transmission efficiency between the Bitters booster station and the projected DeZavala elevated tank, as well as within PZ 1111. Without this transmission main the tank will not be able to fill and customers in the PZ 1111 (PZ 7) area will continue to fall below 35 psi during high demand seasons.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	\$2,596,838 (2021)
<b>Construction:</b>	\$16,463,616 (2023)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

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



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

**PROJECT OVERVIEW**

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

**Description and Scope:**

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

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

**Justification:**

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

**Funding Information:**

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

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

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

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

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

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

**SAN ANTONIO WATER SYSTEM  
2021 CAPITAL IMPROVEMENT PROGRAM  
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<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-11510
<b>Project:</b>	Dead End Main (DEM) Elimination via Looping 2021
<b>Programmed Amount:</b>	\$4,040,040
<b>Core Business:</b>	WD - Water Delivery
<b>Category:</b>	Main Replacement - Water
<b>Phase:</b>	Construction
<b>Council District:</b>	System Wide
<b>Description and Scope:</b>	
<p>The Dead End Main (DEM) Flushing Program is a required program to meet Texas Commission on Environmental Quality (TCEQ) regulations, 30 Texas Administrative Code (TAC) Chapter 290.46. There are more than 9,000 dead end mains in the SAWS distribution system. Approximately 195 of these dead end mains were requested to be reviewed for abandonment or elimination due to potential quality issues resulting from the mains not holding chlorine residual, which cannot be addressed with auto-flushers. The design consultant for this project is preparing plans to eliminate 26 of the dead end water mains that were reviewed and determined to be the most practical. This funding will be to continue the construction work of eliminating these DEM's. The duration is recurring depending on changes to TCEQ requirements. This is year 3 of at least a 5 year effort.</p>	
<b>Justification:</b>	
<p>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.</p> <p>Eliminating DEM's where practical will reduce staff time in flushing these sites. Some of the sites identified for looping have a higher frequency flushing requirement.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	
<b>Construction:</b>	\$3,930,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

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

**SAN ANTONIO WATER SYSTEM  
2021 CAPITAL IMPROVEMENT PROGRAM  
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<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-11426
<b>Project:</b>	Kiefer Road Water Main Replacement Project
<b>Programmed Amount:</b>	\$1,439,200
<b>Core Business:</b>	WD - Water Delivery
<b>Category:</b>	Main Replacement - Water
<b>Phase:</b>	Construction
<b>Council District:</b>	District 02
<b>Description and Scope:</b>	
<p>Installation of about one mile of 12-inch polyvinyl chloride (PVC) water main along Kiefer Road to replace an existing 6-inch concrete water main, from north of E. Houston St. to Lancer Dr. Additionally, the project will install approximately one-quarter mile of new 12-inch PVC water main to an existing SAWS main on Cal Turner. All existing water services will be relayed to the new water main.</p>	
<b>Justification:</b>	
<p>The existing main is undersized and in poor condition. It is in need of replacement. At the same time, this project will tie in to an existing dead end main on Cal Turner Blvd, thus eliminating the dead end.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	
<b>Construction:</b>	\$1,400,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	



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

**SAN ANTONIO WATER SYSTEM  
2021 CAPITAL IMPROVEMENT PROGRAM  
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<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-11306
<b>Project:</b>	Ranchland Acres Water Main Replacement
<b>Programmed Amount:</b>	\$1,975,980
<b>Core Business:</b>	WD - Water Delivery
<b>Category:</b>	Main Replacement - Water
<b>Phase:</b>	Construction
<b>Council District:</b>	OCL
<b>Description and Scope:</b>	
<p>The project will install approximately 2,000 linear feet of 8-inch water main and relay existing water services from main to meter. The water main will be installed along the perimeter of the block formed by West Ave, Ranchland Drive, Roundup Drive, and Adobe Drive. The project also includes the replacement of approximately 2,200 linear feet of 16-inch water main along McNeel Road from Erskine Place to Sladen Drive. In addition, dead-end water mains on Shadwell/St. Cloud and Donaldson Avenue.</p>	
<b>Justification:</b>	
<p>SAWS Engineering has requested the replacement of these pipelines due to a high likelihood of failure when compared to the rest of the water distribution system. This is due to a combination of pipe age, pipe material, surrounding soil type, and main break history. The replacement of the pipes is considered a proactive approach which will save SAWS cost for repair and rehabilitation in the future.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	
<b>Construction:</b>	\$1,922,160 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

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

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

<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-10910
<b>Project:</b>	Valves Services and Meter Replacements - SAWS - 2021
<b>Programmed Amount:</b>	\$16,448,000
<b>Core Business:</b>	WD - Water Delivery
<b>Category:</b>	Main Replacement - Water
<b>Phase:</b>	Construction
<b>Council District:</b>	System Wide
<b>Description and Scope:</b>	
<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>	
<b>Justification:</b>	
<p>Replacement work is necessary to restore service and is more efficient than repair.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	
<b>Construction:</b>	\$16,000,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

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

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

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

<b>PROJECT OVERVIEW</b>	
<b>Project ID:</b>	Pro-10803
<b>Project:</b>	Broadband Access Points and Programmable Logic Controllers Replacement – Phase 3
<b>Programmed Amount:</b>	\$2,056,000
<b>Core Business:</b>	WD - Water Delivery
<b>Category:</b>	Production
<b>Phase:</b>	Construction
<b>Council District:</b>	System Wide
<b>Description and Scope:</b>	
<p>This project (Phase 3) will replace aging radio communication system used to receive data from the water production and pumping stations with new wireless communication infrastructure to upgrade communication capability and replace obsolete control equipment. More than 100 water production facilities are controlled and operated from a central control point. The existing equipment is old and some components are no longer supported by the manufacturer. The radio systems have an expected lifespan of 7 years. The existing systems have been in use for 10 to 20 years.</p> <p>Phase 2 is currently in construction at a cost of \$4.2 million. Phase 3 is currently in design at a design fee of \$876,000. Funding is needed in 2021 for an increase in scope to accommodate structural modifications for communications equipment.</p>	
<b>Justification:</b>	
<p>The master plan for upgrade of the SCADA system recommends this upgrade. Phase 3 will address the Programmable Logic Controllers (PLC) and radios at 30 additional Water Production facilities. These PLCs and radios need to be replaced as part of this Project due to staffing limitations that preclude this work from being done in-house. Additionally, upgrades to the chlorine leak monitoring system at 38 Water Production facilities will be done. These upgrades are necessary to provide comprehensive and remote monitoring of the chlorine system at these facilities. Additional funding is required in 2021 to accommodate structural modifications for the communications equipment. This allows staff to maintain operational continuity and respond to events safely.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	
<b>Construction:</b>	\$3,000,000 (2020) \$2,000,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

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

**PROJECT OVERVIEW**

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

**Description and Scope:**

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

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

**Justification:**

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

**Funding Information:**

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

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

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



**SAN ANTONIO WATER SYSTEM  
2021 CAPITAL IMPROVEMENT PROGRAM  
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<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-00020
<b>Project:</b>	DeZavala Elevated Storage Tank
<b>Programmed Amount:</b>	\$7,454,439
<b>Core Business:</b>	WD - Water Delivery
<b>Category:</b>	Production
<b>Phase:</b>	Construction
<b>Council District:</b>	District 08
<b>Description and Scope:</b>	
<p>This project will design a new 2.5 million gallon elevated water storage tank for Pressure Zone 1111 (formerly PZ 7). This pressure zone serves a large area both east and west of Interstate 10, and this master planned water storage tank will accommodate future growth in the pressure zone. The project will be designed in 2020 and constructed in 2021. In 2019, SAWS acquired land at the intersection of DeZavala Rd. and Indian Wood Rd. to construct the tank.</p>	
<b>Justification:</b>	
<p>This project is required by SAWS Master Planning to address future growth in a rapidly growing part of the city. It also addresses TCEQ's requirement for elevated storage tank within each pressure zone. This project will help provide a consistent pressure within the pressure zone and minimize fluctuation in pressure during distribution of water.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	\$620,000 (2020)
<b>Construction:</b>	\$7,251,400 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

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

**SAN ANTONIO WATER SYSTEM  
2021 CAPITAL IMPROVEMENT PROGRAM  
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<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-11516
<b>Project:</b>	Market Street Pump Station Disinfection System Upgrades
<b>Programmed Amount:</b>	\$514,000
<b>Core Business:</b>	WD - Water Delivery
<b>Category:</b>	Production
<b>Phase:</b>	Design
<b>Council District:</b>	District 01
<b>Description and Scope:</b>	
<p>Project to design the complete replacement of the chlorine disinfection system with either bulk sodium hypochlorite or an on-site generation sodium hypochlorite system that is sized to handle the pump station's maximum well pump capacity. Given the pump station is located Downtown in the historical district, there will be a need to build a new building to house the new disinfection system.</p>	
<b>Justification:</b>	
<p>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.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	\$500,000 (2021)
<b>Construction:</b>	\$5,000,000 (2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM  
2021 CAPITAL IMPROVEMENT PROGRAM  
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**PROJECT OVERVIEW**

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

**Description and Scope:**

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

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

**Justification:**

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

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

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

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

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

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

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

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

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



**SAN ANTONIO WATER SYSTEM  
2021 CAPITAL IMPROVEMENT PROGRAM  
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<b>PROJECT OVERVIEW</b>	
<b>Project ID:</b>	Pro-11453
<b>Project:</b>	Turtle Creek No. 3 Primary Pump Station
<b>Programmed Amount:</b>	\$25,700,000
<b>Core Business:</b>	WD - Water Delivery
<b>Category:</b>	Production
<b>Phase:</b>	Construction
<b>Council District:</b>	District 08
<b>Description and Scope:</b>	
<p>This project includes pump station improvements, which will provide water to the densely populated Medical Center area. This project, identified in the 2008 Water Infrastructure Plan, will result in a new 12.5 million gallon per day PZ 8 primary pump station with a 5 million gallon storage tank. Additionally, the pump station will have the capability to be expanded in the future to 25 million gallons per day, pending a new pipeline which would allow the utilization of that full capacity. The station will be located at the same site as the existing Turtle Creek #3 pump station, currently consisting of only one small well. By a different project, a water transmission main will be constructed in 2021 to convey water from the pump station to the Medical Center area.</p>	
<b>Justification:</b>	
<p>The improved pump station will provide additional service to the Medical Center area. This critical area is currently served by the small Turtle Creek #2 primary pump station, and the Dreamhill and Turtle Creek #3 secondary wells. The failure of any, or a combination, of these three wells would seriously affect SAWS' ability to maintain reliable water service to the Medical Center area.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	
<b>Construction:</b>	\$25,000,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

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# WASTEWATER

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

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

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

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

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



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

**SAN ANTONIO WATER SYSTEM  
2021 CAPITAL IMPROVEMENT PROGRAM  
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**PROJECT OVERVIEW**

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

**Description and Scope:**

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

**Justification:**

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

**Funding Information:**

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

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

**SAN ANTONIO WATER SYSTEM  
2021 CAPITAL IMPROVEMENT PROGRAM  
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<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-11350
<b>Project:</b>	Classen Steubing New Bore Alignment
<b>Programmed Amount:</b>	\$1,799,117
<b>Core Business:</b>	WW - Wastewater
<b>Category:</b>	Mains New - Sewer
<b>Phase:</b>	Construction
<b>Council District:</b>	District 09
<b>Description and Scope:</b>	
<p>The project consists of the installation of approximately one-third of a mile of 30-inch sewer pipe and the elimination of two lift stations, LS #150 and LS #191. This project includes a 720 foot bore under a San Antonio River Authority (SARA) dam and an extension of 150 feet along U.S. Highway 281 to connect the new 30-inch main crossing Mud Creek with the Classen-Steubing project.</p>	
<b>Justification:</b>	
<p>The project consisted of a bore under a dam, which was not completed by the Pro-10818 Classen-Steubing Oversized Sewer Main project due to complications with the boring equipment and the different types of soil. The 36-inch main was also not completely laid upstream of the manhole.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	
<b>Construction:</b>	\$1,750,114 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM  
2021 CAPITAL IMPROVEMENT PROGRAM  
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<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-10146
<b>Project:</b>	Helotes Creek Gravity Main and Lift Station #246 Elimination
<b>Programmed Amount:</b>	\$17,409,832
<b>Core Business:</b>	WW - Wastewater
<b>Category:</b>	Mains New - Sewer
<b>Phase:</b>	Construction
<b>Council District:</b>	OCL
<b>Description and Scope:</b>	
<p>The Helotes Creek Gravity Main and Lift Station #246 Elimination project consists of constructing approximately 2.5 miles of 15-inch to 27-inch gravity wastewater mains. The mains will be constructed in the West Basin from Lift Station #246 near Jericho Road, generally southward along State Highway 16 (Bandera Road) to the intersection of Bandera Road and Farm-to-Market Road (FM) 1560. This project will eliminate Lift Station #246 and allow wastewater flows to bypass Lift Station #233, a lift station at critical capacity.</p>	
<b>Justification:</b>	
<p>The Helotes Creek Gravity Main and Lift Station #246 Elimination project is needed to eliminate the potential for sanitary sewer overflows due to lift station failures. This master-planned project allows for future growth.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	
<b>Construction:</b>	\$16,935,634 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

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

**SAN ANTONIO WATER SYSTEM  
2021 CAPITAL IMPROVEMENT PROGRAM  
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**PROJECT OVERVIEW**

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

**Description and Scope:**

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

**Justification:**

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

**Funding Information:**

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

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

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

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



**SAN ANTONIO WATER SYSTEM  
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<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-00272
<b>Project:</b>	C-18 McCullough Avenue Sewer Replacement
<b>Programmed Amount:</b>	\$3,906,400
<b>Core Business:</b>	WW - Wastewater
<b>Category:</b>	Main Replacement - Sewer
<b>Phase:</b>	Construction
<b>Council District:</b>	District 01
<b>Description and Scope:</b>	
<p>This project was implemented to ease capacity issues in the Central Sewershed. It will start downstream at the newly completed Barbara Drive drainage project, and continue north along alley ways and onto Waring Drive at Oblate Drive. It will follow Waring Drive. until it turns west on to Springwood Lane. It will then run north on the east side of McCullough Avenue until it meets the upstream tie in at East Rampart. The project will upsize approximately 0.85 miles of sewer main by replacing existing 12" and 15" pipe with 21", 27", and 30" pipe.</p>	
<b>Justification:</b>	
<p>SAWS is obligated by the EPA Consent Decree to remediate field verified capacity constraints. This project is required by the capacity remedial measures plan approved by EPA.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	\$44,490 (2020)
<b>Construction:</b>	\$3,800,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

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

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<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-11287
<b>Project:</b>	Central Sewershed Package 10 (Terrell Hills)
<b>Programmed Amount:</b>	\$1,556,392
<b>Core Business:</b>	WW - Wastewater
<b>Category:</b>	Main Replacement - Sewer
<b>Phase:</b>	Construction
<b>Council District:</b>	OCL
<b>Description and Scope:</b>	
<p>This purpose of this package is to rehabilitate sewer segments in poor condition that have been committed to the Condition Remedial Measures Plan. The rehabilitation method includes 0.65 miles of cured-in-place pipe.</p>	
<b>Justification:</b>	
<p>San Antonio Water System (SAWS) entered into a Consent Decree (CD) with the United States Environmental Protection Agency (EPA) on July 23, 2013. As part of the CD, SAWS is required to assess the condition of approximately 5,160 miles of gravity sewer main and identify condition remedial measures on pipes with very poor condition rating. This project has been identified as in need of repair due to condition and was prioritized as part of the EPA Consent Decree.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	\$401,925 (2020)
<b>Construction:</b>	\$1,514,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

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

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<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-10795
<b>Project:</b>	E-74 Rosillo Creek Sewer Project
<b>Programmed Amount:</b>	\$4,523,200
<b>Core Business:</b>	WW - Wastewater
<b>Category:</b>	Main Replacement - Sewer
<b>Phase:</b>	Construction
<b>Council District:</b>	OCL
<b>Description and Scope:</b>	
<p>Construction on this project will replace approximately one-half mile of an existing 24-inch gravity sanitary sewer main with a 60-inch in-line storage main and make provisions for a future odor control facility in the Eastern Sewershed. The future facility location will be just off of the IH-10 East Access Road., near the Rosillo Creek crossing. From the facility location the new alignment will tie into the existing main and follow Rosillo Creek south where it will reconnect to the existing main. A service road will be installed along the new pipeline for inspection and maintenance access.</p>	
<b>Justification:</b>	
<p>SAWS is obligated by its consent decree to remediate field verified capacity constraints. This project is needed to correct capacity deficiencies in the existing sanitary sewer infrastructure as required by the EPA Consent Decree and identified in the Capacity Remedial Measures Plan, approved March 25, 2020.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	\$2,263 (2018)
<b>Design:</b>	
<b>Construction:</b>	\$4,400,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

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

**SAN ANTONIO WATER SYSTEM  
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<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-10916
<b>Project:</b>	Main Replacements - Sewer - SAWS Crews - 2021
<b>Programmed Amount:</b>	\$3,598,000
<b>Core Business:</b>	WW - Wastewater
<b>Category:</b>	Main Replacement - Sewer
<b>Phase:</b>	Construction
<b>Council District:</b>	System Wide
<b>Description and Scope:</b>	
<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>	
<b>Justification:</b>	
<p>The replacement work is necessary to restore service and is required to comply with the EPA Consent Decree.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	
<b>Construction:</b>	\$3,500,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM  
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<b>PROJECT OVERVIEW</b>	
<b>Project ID:</b>	Pro-10919
<b>Project:</b>	Sewer Laterals – 2021
<b>Programmed Amount:</b>	\$5,448,400
<b>Core Business:</b>	WW – Wastewater
<b>Category:</b>	Main Replacement – Sewer
<b>Phase:</b>	Construction
<b>Council District:</b>	System Wide
<b>Description and Scope:</b>	
<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>	
<b>Justification:</b>	
<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>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	
<b>Construction:</b>	\$5,300,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	



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

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

**SAN ANTONIO WATER SYSTEM  
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<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-10918
<b>Project:</b>	Wastewater Main Replacement Work Order Engineering Contract - 2021
<b>Programmed Amount:</b>	\$4,112,000
<b>Core Business:</b>	WW - Wastewater
<b>Category:</b>	Main Replacement - Sewer
<b>Phase:</b>	Design
<b>Council District:</b>	System Wide
<b>Description and Scope:</b>	
<p>This annual project will fund design services to repair/replace sewer mains that have experienced cave-ins and overflows. These projects vary in size and location and may require the solicitation of contractor construction services on an urgent basis. These projects will be constructed on an emergency basis to correct unsanitary and potentially hazardous conditions that pose a threat to public health and safety and are primarily projects required by the EPA Consent Decree.</p>	
<b>Justification:</b>	
Design of replacement/repair mains is necessary to restore and maintain wastewater service.	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	\$4,000,000 (2021)
<b>Construction:</b>	
Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.	

**SAN ANTONIO WATER SYSTEM  
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<b>PROJECT OVERVIEW</b>	
<b>Project ID:</b>	Pro-10657
<b>Project:</b>	Leon Creek WRC Electrical System Improvements - Phase 2
<b>Programmed Amount:</b>	\$411,200
<b>Core Business:</b>	WW - Wastewater
<b>Category:</b>	Treatment
<b>Phase:</b>	Design
<b>Council District:</b>	District 04
<b>Description and Scope:</b>	
<p>This project will design the replacement of the motor control centers, variable frequency drives and buildings at the dissolved air flotation and blowers area that are aging, in poor condition and/or do not meet Federal, State and Local electrical codes at the Leon Creek WRC. The electrical equipment to be replaced in this project was assessed and deemed to be at the end of its service life and in need of replacement by the Leon Creek WRC Electrical System Assessment Project. Phase 1 focused on the replacement of the main switchgear building and laid the foundation for Phase 2 work.</p> <p>Phase 1 will be in construction in the fall of 2020. Additionally, with SAWS' decision to transition to a programmable logic controller (PLC) based system from the current distributed control system, the project will also replace the existing controller with a PLC to support this effort.</p>	
<b>Justification:</b>	
<p>The Leon Creek WRC has been in operation since 1965. The plant electrical equipment to be replaced on this project has been in operation since 2000 and is in moderate condition. Failure of this equipment could interrupt the treatment process, require emergency generators, and cause a fire or other safety issue.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	\$400,000 (2021)
<b>Construction:</b>	\$4,000,000 (2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

**SAN ANTONIO WATER SYSTEM  
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**PROJECT OVERVIEW**

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

**Description and Scope:**

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

**Justification:**

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

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

**Design:** \$1,245,800 (2019)

**Construction:** \$21,101,145 (2021)

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

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

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

**SAN ANTONIO WATER SYSTEM  
2021 CAPITAL IMPROVEMENT PROGRAM  
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**PROJECT OVERVIEW**

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

**Description and Scope:**

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

**Justification:**

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

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

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

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

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



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<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-00120
<b>Project:</b>	Steven M. Clouse WRC Electrical System Improvements - Phase 2
<b>Programmed Amount:</b>	\$4,112,000
<b>Core Business:</b>	WW - Wastewater
<b>Category:</b>	Treatment
<b>Phase:</b>	Construction
<b>Council District:</b>	District 03
<b>Description and Scope:</b>	
<p>This project is the second of four phases and will replace various plant electrical switchgear, motor control centers, transformers and generators that are aging, in poor condition and/or do not meet Federal, State and Local electrical codes. All plant electrical equipment was assessed and evaluated, and the electrical equipment to be replaced in Phase 2 was deemed to be in poor condition.</p> <p>Phase 1 has been completed and focused on the high voltage equipment and installed a new main switchgear building that laid the foundation for tie in of all future phased improvements. Phase 2 will award for construction in early 2021 at an estimated cost of \$28.1 million (funded from 2019, 2020 and 2021 CIP years based on expanded project scope). Included in the construction is the work associated with transitioning the existing distributed control system into a programmable logic controller based system to align with the other core service areas in SAWS system.</p> <p>Phase 3 will be constructed in 2023 at an estimated cost of \$15 million and Phase 4 is planned for 2025 at \$10.5 million.</p>	
<b>Justification:</b>	
<p>The Dos Rios WRC has been in operation since 1987, and the plant electrical equipment is in poor condition. Failure of this equipment could interrupt the treatment process, require emergency generators, and cause a fire or other safety issue. Additional funds are needed in 2021 to allow for the change in scope associated with the Control System Upgrade project.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	\$1,900,057 (2017)
<b>Construction:</b>	\$4,000,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

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

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

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

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

<b>PROJECT OVERVIEW</b>	
<b>Project ID:</b>	Pro-11250
<b>Project:</b>	Water Recycling Center Control System Upgrades
<b>Programmed Amount:</b>	\$5,140,000
<b>Core Business:</b>	WW - Wastewater
<b>Category:</b>	Treatment
<b>Phase:</b>	Construction
<b>Council District:</b>	District 03, District 04
<b>Description and Scope:</b>	
<p>SAWS Water Recycling Center (WRC) Control System Upgrades will upgrade the Emerson SCADA control systems at SAWS three wastewater recycling centers. This upgrade will deploy an all new Human Machine Interface (HMI) and controllers improving the monitoring and controlling capabilities of WRC equipment and provide more advanced cybersecurity defenses for these critical systems. The upgrade will enable better analytics and automation to improve operational capabilities, along with better coordination between all three WRC control systems.</p> <p>The plan is to do the design and construction as follows:</p> <ul style="list-style-type: none"> <li>• 2020: \$4.0M - Design for Clouse, Medio and Leon WRCs and Phase 1 Construction for Clouse WRC</li> <li>• 2021: \$5.0M - Phase 2 Construction for Clouse WRC</li> <li>• 2023: \$4.0M - Construction for Medio and Leon WRCs</li> </ul>	
<b>Justification:</b>	
<p>The SCADA systems are outdated and need to be updated. The Emerson technology is end of life and we do often experience costly failures at the plants that cause outages and operational issues.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	
<b>Construction:</b>	\$5,000,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

# WATER SUPPLY

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

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

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

<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-00003
<b>Project:</b>	Artesia Wells Phase 1
<b>Programmed Amount:</b>	\$9,252,000
<b>Core Business:</b>	WS - Water Supply
<b>Category:</b>	ASR
<b>Phase:</b>	Construction
<b>Council District:</b>	District 02
<b>Description and Scope:</b>	
<p>Drill new wells to restore production capacity at Artesia Pump Station. The original 6 wells were drilled in the 1950s. Three of the six original wells have completely failed due to holes in the casing. Two of the remaining wells have been rehabilitated, but the rehabilitation process caused a significant loss in production capacity.</p>	
<b>Justification:</b>	
<p>The Artesia Pump Station is a significant pump station serving the area around the AT&amp;T Center, and providing water to be stored in the Aquifer Storage and Recovery site. If these wells fail, SAWS will not be able to bank as much water at the ASR and this would be detrimental during a drought of record.</p> <p>This project is required in order to ensure the Artesia PS can continue to operate as intended. This pump station used to have six wells, however three of those wells were plugged due to concerns with the steel casings. The remaining three wells are in bad shape as well, they have been repaired numerous times and it's just a matter of time before they fail as well. Losing those wells will mean the pump station won't be able to operate, which in turn will limit the amount of water SAWS can send to the H2Oaks Facility and more importantly, it will cripple SAWS ability to feed pressure zone 828 and all of the southeast area of San Antonio.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	
<b>Construction:</b>	\$9,000,000 (2021)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	



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

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

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

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

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

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

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

**PROJECT OVERVIEW**

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

**Description and Scope:**

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

**Justification:**

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

**Funding Information:**

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

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

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

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

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

<b><u>PROJECT OVERVIEW</u></b>	
<b>Project ID:</b>	Pro-11451
<b>Project:</b>	Leon to Clouse Recycled Water Interconnect Project
<b>Programmed Amount:</b>	\$1,028,000
<b>Core Business:</b>	RW - Recycled Water
<b>Category:</b>	Recycled Water
<b>Phase:</b>	Design
<b>Council District:</b>	District 03
<b>Description and Scope:</b>	
<p>The project will design an improvement that will loop the recycled water system and connect the recycled water mains from Leon Creek Water Recycling Center (LC WRC) to the Steven M. Clouse Water Recycling Center (SMC WRC). The project is divided into two phases. The first phase extends from LC WRC to a location near the southeastern corner of Mitchell Lake. The second phase extends from Mitchell Lake to SMC WRC.</p> <p>Phase 1 of the project will convey recycled water to Mitchell Lake, the projected constructed wetlands south of Mitchell Lake, the Navistar facility, and Mission del Lago Golf Course. Phase 2 will be designed and constructed at a future date to be determined.</p>	
<b>Justification:</b>	
<p>Connecting the recycled water systems from LC WRC and SMC WRC provides for added reliability and redundancy to recycled water customers. The project also provides flexibility to recycled water system operations and enables expansion and provision of service to potential customers into the future.</p>	
<b>Funding Information:</b>	
<b>Acquisition:</b>	
<b>Design:</b>	\$1,000,000 (2021)
<b>Construction:</b>	\$10,000,000 (2022)
<p>Amounts shown are estimated costs excluding SAWS overhead, which is reported as a separate CIP project.</p>	

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

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

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

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



# CHILLED WATER

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

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

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