

CIP PROJECT DATA

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WATER DELIVERY

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**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10811		
Project:	Automated Metering Infrastructure (AMI)		
Programmed Amount:	\$1,225,345		
Core Business:	WD - Water Delivery		
Category:	Corporate WD		
Phase:	Design		
Council District:	System Wide		
Description and Scope:			
<p>First year of AMI implementation represents pilot program to evaluate the benefits of fully implementing AMI in subsequent years. Successful AMI implementation will have a significant impact on the SAWS meter to cash process. It will greatly improve SAWS ability to provide relevant and timely information to SAWS customers about their water usage, likely reducing water usage as a result of leaks on the customer side of the meter and improve conservation efforts. Improved meter registration will have a positive impact on Non-Revenue Water. The projected costs and benefits of this project have been allocated evenly between Water Delivery and Water Supply.</p>			
Justification:			
<p>The Business Case performed by West Monroe in 2017, calculated a net benefit of AMI of \$31M (NPV) over a 20 year term. The biggest impact on the benefits provided during the 20 year period is the assumed improved meter registration that results from replacing 100% of SAWS mechanical meters with static meters. While other operational improvements were assumed in the business case by utilizing the network to provide data, the vast majority of the positive results are from an assumed 2.5% improvement in meter registration.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.	2019	2019	2020 - 2023
	\$0	\$1,225,345	approx. \$85,000,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-00161		
Project:	General Legal Services - WD - 2019		
Programmed Amount:	\$30,840		
Core Business:	WD - Water Delivery		
Category:	Corporate WD		
Phase:	Acquisition		
Council District:	System Wide		
Description and Scope:			
Specialized legal support is required for critical projects.			
Justification:			
External legal support is sought only when there is insufficient internal legal staff to support the effort, or specialized legal expertise is required.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.	2019	2019	2019
	\$30,000	\$0	\$0

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-10302		
Project:	Northeast Operations Center Project - WD		
Programmed Amount:	\$771,000		
Core Business:	WD - Water Delivery		
Category:	Corporate WD		
Phase:	Design		
Council District:	District 10		
Description and Scope:			
<p>Professional design services to hire the Architect and Engineer (A/E) team required to design the new Northeast Operations Center which is Phase 3 of the Service Center Project. In January 2017, the SAWS Board of Trustees approved the purchase of a new site located near the intersection of 1604 and Judson Rd. The selected A/E firm will design this new facility to include an administration building, fleet facility, supply facility and fueling islands to include associated parking and materials storage areas. The cost of this project has been allocated evenly between Water Delivery and Wastewater.</p>			
Justification:			
<p>Upon completion of this new site, SAWS field crews can vacate the administration building (circa. 1981) at the SAWS Nacogdoches pump station and SAWS will remove the underground fuel tanks at that production site.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.	2017	2019	2021
	\$975,650	\$750,000	\$10,500,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10384		
Project:	Service Center Upgrades Phase 2		
Programmed Amount:	\$3,696,000		
Core Business:	WD - Water Delivery		
Category:	Corporate WD		
Phase:	Construction		
Council District:	District 02, District 08		
Description and Scope:			
<p>Phase 2 Service Center Project includes the original project scope of new and renovated facilities at the North West Service Center (NWSC) and East Side Service Center (ESSC). The requested funds will be required to cover certain cost escalations associated with this project. The cost of this project has been allocated between Water Delivery (66%) and Wastewater (34%).</p>			
Justification:			
<p>This project addresses code compliance and life safety issues at the facilities; addresses aging infrastructure by removing the underground fuel tanks (UGTs) and replacing them with above ground tanks (AGTs). The existing fuel facility at ESSC will also be relocated away from traffic congestion. The project also replaces outdated fire alarm systems, security systems and information systems. The existing Service Centers are at full capacity and do not have adequate space to accommodate new growth to the system or additional staff. This project also would include demolition and replacement of the vacated 1973 administration building on the Wurzbach Production Tank site which has exceeded its life expectancy. The Phase 2 Service Center Project will continue the Service Center Master Plan which was implemented to address growth to SAWS service area and improve Distribution & Collection (D&C) response time. The completion of the Service Center Phase 2 Project will increase efficiencies for D&C operations at the ESSC, allow for SAWS to declare as surplus and sell the Mission Road Service Center, and avoid escalating operating costs at Mission Road and at ESSC. This Project will also relocate customer service field crews and Resource Protection & Compliance (RPC) staff from Mission Road increasing efficiency in fleet maintenance, and reducing drive time.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2015	2019
	\$0	\$0	\$3,593,311

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-10799		
Project:	Water Delivery Owner Controlled Construction Changes (OCCC) 2019		
Programmed Amount:	\$2,492,900		
Core Business:	WD - Water Delivery		
Category:	Corporate WD		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
Funds earmarked to support change orders for approved CIP projects that would exceed original project appropriations.			
Justification:			
The availability of OCCC funds recognizes that unforeseen cost changes can occur in the execution of CIP projects. Change orders valued above \$100,000 must be approved by the SAWS Board of Trustees.			
Funding Information:			
	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2017	2019
	\$0	\$0	\$2,425,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-11092		
Project:	Water Delivery Overhead 2019		
Programmed Amount:	\$10,750,000		
Core Business:	WD - Water Delivery Corporate WD		
Category:	Corporate WD		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
<p>Overhead costs cover the direct costs associated with SAWS personnel who manage CIP projects, in addition to the indirect costs associated with SAWS personnel who support the CIP program during the capitalizable phases of the projects. Overhead costs were in part estimated based on time entered by SAWS CIP project management and support personnel during 2018 into the SAWS CIP Time Tracker system. Other factors included in the estimate of overhead costs are support to prior year CIP programs and estimated support to future CIP implementation.</p>			
Justification:			
<p>Overhead costs are applied to SAWS personnel costs in order to capture direct incremental costs associated with SAWS personnel that support the development and construction of CIP projects.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2018	2019
	\$0	\$0	\$10,750,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-10739		
Project:	Northeast Service Center 16-inch Water Main along Judson Road		
Programmed Amount:	\$603,847		
Core Business:	WD - Water Delivery		
Category:	Mains New - Water		
Phase:	Construction		
Council District:	District 10		
Description and Scope:			
Construction of a new 16-inch water line along Judson Road to provide water service to the new SAWS Northeast Service Center, and provide water for projected growth in the area.			
Justification:			
This project will serve projected growth in Pressure Zone 1125, as well as supply water to SAWS new Northeast Service Center.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2019
	\$0	\$76,700	\$510,700

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10297		
Project:	Potranco Road Pressure Zone Interconnection		
Programmed Amount:	\$185,040		
Core Business:	WD - Water Delivery		
Category:	Mains New - Water		
Phase:	Construction		
Council District:	District 04		
Description and Scope:			
SAWS recommends that Pressure Zone 1082 be interconnected with Pressure Zone 7, due to the constant running of the booster pumps at the PZ 1082, Tippecanoe facility. This project will install 120 ft. of 12-inch main from the existing 12-inch Pressure Zone 7 main traversing Potranco Rd. connecting to the existing 12-inch main along Fillmore Dr. An 8-inch master pressure reducing valve and main must be constructed in order to retire the facility.			
Justification:			
The constant running of the Tippecanoe facility booster pumps is inefficient and increases maintenance and operating costs. Retiring the facility will save maintenance and operating costs.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2017	2019
	\$0	\$0	\$180,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-00104		
Project:	Water Main Oversizing 2019 - SAWS		
Programmed Amount:	\$3,598,000		
Core Business:	WD - Water Delivery		
Category:	Mains New - Water		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
<p>Funds are required for SAWS proportionate share of the cost of mains which are necessary to serve anticipated growth but are larger than the size main required by a developer customer or single customer. Developers are required to build necessary offsite infrastructure to meet the needs of their development. When growth is projected in adjacent tracts, SAWS contributes money to increase the size of the mains to serve the additional growth. Sharing in the cost is beneficial to both SAWS and the developer and prevents the construction of parallel smaller sized mains.</p>			
Justification:			
Participating in oversizing is a cost effective way to meet the needs of growth. It is funded by impact fees collected from new development.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2019
	\$0	\$0	\$3,500,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-11124		
Project:	Dead End Main (DEM) Elimination via Looping		
Programmed Amount:	\$1,028,000		
Core Business:	WD - Water Delivery		
Category:	Main Replacement - Water		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
<p>The Dead End Main (DEM) Flushing Program is a required program to meet Texas Commission on Environmental Quality (TCEQ) regulations, 30 TAC Chapter 290.46. There are more than 9,000 dead end mains in the SAWS distribution system. Approximately 195 of these dead end mains were requested to be reviewed for abandonment or elimination. Of the 195 DEMs identified, 24 require flushing. Addressing these DEMs via looping will eliminate the need for future flushing. Design Consultant KCI is preparing design plans to eliminate these projects. This funding will be to continue the construction work of eliminating these DEMs. This is year 2 of at least a 5 year effort.</p>			
Justification:			
<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. Eliminating the DEM's where practical will reduce staff time in flushing these sites. Some of the sites identified for looping have a higher frequency flushing requirement.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2018	2019
	\$0	\$0	\$1,000,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
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PROJECT OVERVIEW			
Project ID:	Pro-00130		
Project:	Governmental Water -SAWS - 2019		
Programmed Amount:	\$30,840,000		
Core Business:	WD - Water Delivery Governmental		
Category:	Water		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
<p>The governmental program consists of projects implemented in conjunction with other government agencies infrastructure work. The program includes replacement of water mains in poor condition, adjustment of water mains whose existing alignment conflicts with proposed new street alignment, and installation of new water mains needed to provide additional capacity.</p> <p>SAWS participates in the Utility Coordination Council, and jointly plans and reviews infrastructure improvements with City of San Antonio (COSA), Bexar County, Texas Department of Transportation (TXDOT), City Public Service (CPS) Energy, AT&T, and other agencies, to maximize effectiveness of public infrastructure.</p>			
Justification:			
Replacing and/or adjusting aging infrastructure in conjunction with other agencies planned street work is the most cost effective approach to infrastructure management.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2019
	\$0	\$0	\$30,000,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
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<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-00214		
Project:	Open Cut Water Contract - SAWS - 2019		
Programmed Amount:	\$1,542,000		
Core Business:	WD - Water Delivery		
Category:	Main Replacement - Water		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
This annual contract provides increased replacement capacity in order to ensure reliable water service is maintained.			
Justification:			
Timely replacement of mains is necessary to restore and maintain water service.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2019
	\$0	\$0	\$1,500,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
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PROJECT OVERVIEW			
Project ID:	Pro-00204		
Project:	Valves Services and Meter Replacements - SAWS - 2019		
Programmed Amount:	\$12,850,000		
Core Business:	WD - Water Delivery		
Category:	Main Replacement - Water		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
<p>This project funds the replacement of water mains, valves, hydrants, and meters within the SAWS distribution system. When replacement is necessary, it is evaluated to determine whether replacement by SAWS crews or a contractor would be more effective and efficient.</p>			
Justification:			
Replacement work is necessary to restore service and can be more cost effective than repair.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2019
	\$0	\$0	\$12,500,000


**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-10694		
Project:	Water Main Condition Inspection & Replacement		
Programmed Amount:	\$8,228,800		
Core Business:	WD - Water Delivery		
Category:	Main Replacement - Water		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
This project provides funds for the rehabilitation or replacement of water mains identified through the use of assessment technology. The water mains included in this project will vary in size and location.			
Justification:			
Mains found to require repair, rehabilitation, or replacement are necessary to provide and maintain water service.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2019
	\$0	\$4,002,335	\$4,002,335


**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-00194		
Project:	Water Main Replacement Work Order Engineering Contract - SAWS - 2019		
Programmed Amount:	\$976,600		
Core Business:	WD - Water Delivery		
Category:	Main Replacement - Water		
Phase:	Design		
Council District:	System Wide		
Description and Scope:			
<p>This annual project will fund design services to repair/replace water mains. These projects vary in size and location, and may require the solicitation of contractor construction services. The projects will replace sub-standard or deteriorated water mains. This project includes \$100,000 for a cost estimating contract for water delivery construction projects.</p>			
Justification:			
Design of mains to be replaced or repaired is necessary to restore and maintain water service.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2019
	\$0	\$950,000	\$0

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10292		
Project:	Broadband Access Points and Programmable Logic Controllers Replacement - Phase 2		
Programmed Amount:	\$4,626,000		
Core Business:	WD - Water Delivery		
Category:	Production		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
<p>This project replaces the aging radio communication system used to receive data from the water production and pumping stations with new wireless communication infrastructure to upgrade communication capability. It also replaces obsolete control equipment at the water production and pumping stations. 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 controllers have an expected lifespan of 10 years.</p> <p>Approximately 26,000 data points at the water production facilities across Bexar County are actively monitored and/or controlled from a central control point. 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 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.</p> <p>The master plan for upgrade of the Supervisory Control and Data Acquisition (SCADA) system recommends these upgrades. Phase 2 will address the facilities that were deemed medium criticality. Phase 1 construction began mid-2017 and will address the high criticality facilities. Phase 3 design is currently planned for 2019.</p>			
Justification:			
<p>Replacing and upgrading the control and communication systems for the pump stations is necessary for uninterrupted service, strengthening of cyber security, migration to one common SCADA control system, and for increased efficiency. Improving technology is needed to reinforce site cyber security and to manage the expanding system without adding additional staff.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2018	2019
	\$0	\$825,000	\$4,500,000


**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10803		
Project:	Broadband Access Points and Programmable Logic Controllers Replacement - Phase 3		
Programmed Amount:	\$359,800		
Core Business:	WD - Water Delivery		
Category:	Production		
Phase:	Design		
Council District:	System Wide		
Description and Scope:			
<p>This project (Phase 3) will provide the design to replace the aging radio communication system used to receive data from the lift stations with new wireless communication infrastructure to upgrade communication capability and replace obsolete control equipment, to include those at former BexarMet facilities, and to add camera monitoring equipment. More than 170 lift station facilities are monitored from a central control point. Phase 3 will consist of more than 130 facilities. 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 controllers have an expected lifespan of 10 years.</p> <p>The upgrades will increase efficiency by allowing development of standardized, automated control strategies for monitoring equipment. Additionally, the monitoring equipment can be programmed from the control center through the broadband system, reducing the labor time involved in driving to the lift station, and the time for a signal to be sent to the lift station will be greatly reduced.</p>			
Justification:			
<p>The master plan for upgrade of the Supervisory Control and Data Acquisition (SCADA) system recommends this upgrade. Phase 3 will address the lift stations that were deemed low criticality, as well as those at former BexarMet facilities. to add camera monitoring equipment. 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 and is scheduled for construction in 2019 at a budgeted cost of \$4.6m.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2020
	\$0	\$350,000	\$3,000,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-10114		
Project:	Meadow Springs Water Production Facility		
Programmed Amount:	\$11,305,944		
Core Business:	WD - Water Delivery		
Category:	Production		
Phase:	Construction		
Council District:	OCL		
Description and Scope:			
<p>This project will construct a new primary pump station with 4.5 million gallons per day (MGD) firm distribution pumping capacity to what is currently Pressure Zone (PZ) 950-West, west of Loop 1604 and north and south of Hwy 90. The primary pump station is planned to be built southwest of the intersection of Hwy 90 and Whisper Way. A new 0.75 MG ground storage tank is also planned for the Meadow Springs facility, along with three 1.5-MGD well pumps to supply the station.</p>			
Justification:			
<p>This project will provide additional supply capacity for projected growth in what is currently PZ 950-West. The service area is projected to grow by over 16,000 customers in the next several years.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2019
	\$0	\$0	\$10,998,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10284		
Project:	Micron Pump Station and Additional Well		
Programmed Amount:	\$3,803,600		
Core Business:	WD - Water Delivery		
Category:	Production		
Phase:	Construction		
Council District:	District 06		
Description and Scope:			
<p>SAWS has been working to address operational challenges at the Anderson Pump Station located at State Highway 151 and Loop 1604 in the rapidly growing far west area of the city. During the peak summer demand period, it was determined that additional supplies from Micron Pump Station will be needed to back up the Anderson Pump Station and meet customer demands. This project will consist of designing and installing one groundwater well, well pump, well head structures, electrical service, road/access structures, and connect piping to the existing system.</p>			
Justification:			
<p>The Micron Pump Station currently has three wells. SAWS will install an additional well to supplement peak water demands.</p>			
Funding Information:			
	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2016	2019
	\$0	\$300,000	\$3,700,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
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<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-11037		
Project:	Mission Pump Station Electrical Improvements		
Programmed Amount:	\$2,056,000		
Core Business:	WD - Water Delivery		
Category:	Production		
Phase:	Construction		
Council District:	District 03		
Description and Scope:			
The scope of this project is the installation of the new electrical, SCADA, controls and yard piping for tying in a new well that was drilled to the existing pump station.			
Justification:			
Since the new well was drilled, the cost to do the electrical work has increased and additional funding is required to complete the project.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2018	2019
	\$0	\$0	\$2,000,000


**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10804		
Project:	Production Facilities Construction Work Order Contract 2019		
Programmed Amount:	\$514,000		
Core Business:	WD - Water Delivery		
Category:	Production		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
<p>This contract will allow work order contracts for construction of small projects not executable by SAWS engineering and operations staff and with a value of \$150,000 or less. SAWS periodically has need for general types of projects that entail rehabilitation, improvement upgrades, addition/demolition, replacement/expansion of equipment and facilities. These include:</p> <ul style="list-style-type: none"> -water production primary and secondary pump station facilities -elevated storage tank and ground storage tank sites -transmission mains (20-inch diameter and larger) -valve & control valve replacement, yard piping, electrical upgrades, SCADA, programming -other related projects of similar nature as above <p>The scope of work may include, but is not limited to potholing and subsurface utility investigation; preparation of the right of way; permit application; coordination with other utilities, agencies and consultants; civil, structural, mechanical, electrical and environmental services related to potable water facilities; preparation of material submittals and shop drawings; preparation of pay estimates; participation in equipment performance testing; final inspection and project completion; and other construction phase services.</p>			
Justification:			
<p>This Work Order Contract will be on an "as-needed" basis, and the scope of the work will depend on the nature of each individual project. A work order will be issued upon identification of a need for a construction activity and determination of its scope and schedule.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2018	2019
	\$0	\$0	\$500,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10805		
Project:	Production Facilities Engineering, Geotechnical, and Surveying Work Order Contract 2019		
Programmed Amount:	\$514,000		
Core Business:	WD - Water Delivery		
Category:	Production		
Phase:	Design		
Council District:	System Wide		
Description and Scope:			
SAWS 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:			
<ul style="list-style-type: none"> -water production primary and secondary pump station facilities -elevated storage tank and ground storage tank sites -transmission mains (20-inch diameter and larger) -valve & control valve replacement, yard piping, electrical upgrades, SCADA, programming -other related projects of similar nature as above 			
The scope of work may include, but is not limited to potholing and subsurface utility investigation; preparation of the right of way; permit application; coordination with other utilities, agencies and consultants; civil, structural, mechanical, electrical and environmental services related to potable water facilities; preparation of material submittals and shop drawings; preparation of pay estimates; participation in equipment performance testing; final inspection and project completion; attendance at public meetings/hearings, and other construction phase services.			
Justification:			
This Work Order Contract will be on an "as-needed" basis, and the scope of the services will depend on the nature of each individual project. A work order will be issued upon identification of a project and determination of its scope and schedule.			
Funding Information:			
Acquisition Year:	Design Year:	Construction Year:	
Amounts shown are estimated costs without projected inflation.	2019	2020	
\$0	\$500,000	\$0	

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-00229		
Project:	Water Production Facilities Disinfection System Upgrades		
Programmed Amount:	\$1,336,400		
Core Business:	WD - Water Delivery		
Category:	Production		
Phase:	Design		
Council District:	System Wide		
Description and Scope:			
<p>This is an ongoing project to replace chlorine gas containers with on-site sodium hypochlorite generation as a disinfectant for potable water. Sodium hypochlorite is a non-hazardous chemical. The three pump stations in this phase are the Artesia, Randolph, and Seale pump stations. The Artesia construction began in 2018, with additional funding in 2019 to design the Randolph and Seale pump stations for construction in 2020 and 2021.</p> <p>This is Phase 2 of a two phase project. Phase 1 construction was in 2014. The total cost for all phases of the project is \$14.6 million.</p>			
Justification:			
<p>This project creates a safer work environment for SAWS employees while increasing protection for the public in the area of each of the pump stations.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2020
	\$0	\$1,300,000	\$4,800,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-00412		
Project:	Water Production Facility Upgrades Phase II		
Programmed Amount:	\$4,831,600		
Core Business:	WD - Water Delivery		
Category:	Production		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
<p>The Water Production Facility Upgrades Phase 2 is the continuation of the rehabilitation of former BexarMet secondary pump stations. This phase includes West Avenue Pump Station (in Castle Hills), Gibbs-Sprawl Pump Station, and Montgomery Pump Station.</p>			
Justification:			
<p>Current infrastructure is beyond its useful life, and replacement parts are difficult to secure. Upgrading these facilities will help ensure reliable water delivery services.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2017	2019
	\$0	\$558,653	\$4,700,000


WASTEWATER

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**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-00163		
Project:	General Legal Services - WW - 2019		
Programmed Amount:	\$113,080		
Core Business:	WW - Wastewater		
Category:	Corporate WW		
Phase:	Acquisition		
Council District:	System Wide		
Description and Scope:			
Specialized legal support is required for critical projects.			
Justification:			
External legal support is sought only when there is insufficient internal legal staff to support the effort, or specialized legal expertise is required.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.	2019	2019	2019
	\$110,000	\$0	\$0

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10303		
Project:	Northeast Operations Center Project - WW		
Programmed Amount:	\$771,000		
Core Business:	WW - Wastewater		
Category:	Corporate WW		
Phase:	Design		
Council District:	District 10		
Description and Scope:			
<p>Professional design services to hire the Architect and Engineer (A/E) team required to design the new Northeast Operations Center which is Phase 3 of the Service Center Project. In January 2017, the SAWS Board of Trustees approved the purchase of a new site located near the intersection of 1604 and Judson Rd. The selected A/E firm will design this new facility to include an administration building, fleet facility, supply facility and fueling islands to include associated parking and materials storage areas. The cost of this project has been allocated evenly between Water Delivery and Wastewater.</p>			
Justification:			
<p>Upon completion of this new site, SAWS field crews can vacate the administration building (circa. 1981) at the SAWS Nacogdoches pump station and SAWS will remove the underground fuel tanks at that production site.</p>			
Funding Information:			
Acquisition Year:	Design Year:	Construction Year:	
2017	2019	2021	
\$700,000	\$750,000	\$10,500,000	
<p>Amounts shown are estimated costs without projected inflation.</p>			

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10384		
Project:	Service Center Upgrades Phase 2		
Programmed Amount:	\$1,904,000		
Core Business:	WW - Wastewater		
Category:	Corporate WW		
Phase:	Construction		
Council District:	District 02, District 08		
Description and Scope:			
<p>Phase 2 Service Center Project includes the original project scope of new and renovated facilities at the North West Service Center (NWSC) and East Side Service Center (ESSC). The requested funds will be required to cover certain cost escalations associated with this project. The cost of this project has been allocated between Water Delivery (66%) and Wastewater (34%).</p>			
Justification:			
<p>This project addresses code compliance and life safety issues at the facilities; addresses aging infrastructure by removing the underground fuel tanks (UGTs) and replacing them with above ground tanks (AGTs). The existing fuel facility at ESSC will also be relocated away from traffic congestion. The project also replaces outdated fire alarm systems, security systems and information systems. The existing Service Centers are at full capacity and do not have adequate space to accommodate new growth to the system or additional staff. This project also would include demolition and replacement of the vacated 1973 administration building on the Wurzbach Production Tank site which has exceeded its life expectancy. The Phase 2 Service Center Project will continue the Service Center Master Plan which was implemented to address growth to SAWS service area and improve Distribution & Collection (D&C) response time. The completion of the Service Center Phase 2 Project will increase efficiencies for D&C operations at the ESSC, allow for SAWS to declare as surplus and sell the Mission Road Service Center, and avoid escalating operating costs at Mission Road and at ESSC. This Project will also relocate customer service field crews and Resource Protection & Compliance (RPC) staff from Mission Road increasing efficiency in fleet maintenance, and reducing drive time.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2015	2019
	\$0	\$0	\$1,852,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-10800		
Project:	Wastewater Owner Controlled Construction Changes (OCCC) 2019		
Programmed Amount:	\$7,754,254		
Core Business:	WW - Wastewater		
Category:	Corporate WW		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
Funds earmarked to support change orders for approved CIP projects that would exceed original project appropriations.			
Justification:			
The availability of OCCC funds recognizes that unforeseen cost changes can occur in the execution of CIP projects. Change orders valued above \$100,000 must be approved by the SAWS Board of Trustees.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2017	2019
	\$0	\$0	\$7,543,049

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-11093		
Project:	Wastewater Overhead 2019		
Programmed Amount:	\$14,750,000		
Core Business:	WW - Wastewater		
Category:	Corporate WW		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
<p>Overhead costs cover the direct costs associated with SAWS personnel who manage CIP projects, in addition to the indirect costs associated with SAWS personnel who support the CIP program during the capitalizable phases of the projects. Overhead costs were in part estimated based on time entered by SAWS CIP project management and support personnel during 2018 into the SAWS CIP Time Tracker system. Other factors included in the estimate of overhead costs are support to prior year CIP programs and estimated support to future CIP implementation.</p>			
Justification:			
<p>Overhead costs are applied to SAWS personnel costs in order to capture direct incremental costs associated with SAWS personnel that support the development and construction of CIP projects.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2018	2019
	\$0	\$0	\$14,750,000


**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-00042		
Project:	Install Sewer Mains and Eliminate Lift Stations Near Port SA		
Programmed Amount:	\$575,680		
Core Business:	WW - Wastewater		
Category:	Collection Facilities		
Phase:	Design		
Council District:	District 04		
Description and Scope:			
<p>This project will design the elimination of five lift stations at Port San Antonio due to operational challenges and increased maintenance costs. This project will install sanitary sewer laterals and mains that will allow for gravity flow of the wastewater, eliminating the need for the lift stations. The five lift stations are numbers 309, 310, 320, 326, and 329 at Port SA. Construction is scheduled for 2021.</p>			
Justification:			
<p>This project will eliminate lift stations and construct gravity sewer mains to replace them. This project is important because it will eliminate the potential for sanitary sewer overflows due to lift station issues. It will also eliminate O&M costs associated with upkeep of the facilities. Deferring this project will require continued operation and maintenance costs at each lift station. Elimination or rehabilitation is required by the EPA Consent Decree.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2021
	\$0	\$560,000	\$5,000,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10105		
Project:	Lift Stations Rehabilitation - Phase 5		
Programmed Amount:	\$1,182,200		
Core Business:	WW - Wastewater		
Category:	Collection Facilities		
Phase:	Design		
Council District:	District 04, District 05		
Description and Scope:			
<p>Rehabilitate eighteen existing lift stations that are located in the Central and West sewersheds at Port San Antonio and Lackland Air Force Base. The project will include safety and security upgrades, and evaluation and rehabilitation of wet wells, pump replacement, and electrical panel upgrades. All of the lift stations will be connected to the remote Supervisory Control and Data Acquisition System (SCADA) monitoring system. Wet well storage capacity will be verified for state regulatory compliance as well as adequate response time in the event of an emergency. The pumping, wet well, and force main capacity will be increased if it is found that the current capacities are inadequate. The EPA Consent Decree requires that these lift stations be rehabilitated by 2023. Construction will start in 2021. The current list of Lift Stations to be rehabilitated are numbers 300, 303, 304, 311, 312, 317, 319, 321, 322, 323, 324, 325, 328, 330, 331, 305, 307, and 333.</p>			
Justification:			
<p>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 sanitary sewer overflows and is required under the EPA Consent Decree.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2021
	\$0	\$1,150,000	\$11,500,000


**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10100		
Project:	Install sewer main from LS 224 to SBSP		
Programmed Amount:	\$745,300		
Core Business:	WW - Wastewater		
Category:	Mains New - Sewer		
Phase:	Construction		
Council District:	District 04		
Description and Scope:			
<p>The Lift Station #224 Elimination project consists of the elimination of Lift Station 224, located near the Love's Travel Stop and Country Store northwest of the intersection of Fischer Road and IH 35 S. This project also consists of constructing approximately 4,500 feet of 12-in gravity sewer main that will connect to the Southwest Bexar Sewer Pipeline (SBSP).</p>			
Justification:			
<p>Lift Station 224 must be eliminated under the EPA Consent Decree by December 31, 2021. Additionally, the elimination of this lift station will capitalize on the Southwest Bexar Sewer Pipeline and reduce operating and maintenance costs.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2016	2019
	\$0	\$202,670	\$725,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-00109		
Project:	Sewer Main Oversizing 2019 - SAWS		
Programmed Amount:	\$1,028,000		
Core Business:	WW - Wastewater		
Category:	Mains New - Sewer		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
<p>Pay for SAWS proportionate share of the cost of mains which are necessary to serve anticipated growth but are larger than the size main required by a developer customer or single customer. Developers are required to build necessary offsite infrastructure to meet the needs of their development. When growth is projected in adjacent tracts, SAWS contributes money to increase the size of the mains to serve the additional growth. Sharing in the cost is beneficial to both SAWS and the developer and prevents the construction of parallel smaller sized mains.</p>			
Justification:			
Participating in oversizing is a cost effective way to meet the needs of growth. It is funded by impact fees collected from new development.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2019
	\$0	\$0	\$1,000,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW															
Project ID:	Pro-00233														
Project:	Governmental Sewer - 2019														
Programmed Amount:	\$17,373,200														
Core Business:	WW - Wastewater														
Category:	Governmental Sewer														
Phase:	Construction														
Council District:	System Wide														
Description and Scope:															
<p>The governmental program consists of projects implemented in conjunction with other government agencies infrastructure work. The program includes replacement of 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.</p> <p>SAWS participates in the Utility Coordination Council, and jointly plans and reviews infrastructure improvements with City of San Antonio (COSA), Bexar County, Texas Department of Transportation (TXDOT), City Public Service (CPS) Energy, AT&T, and other agencies, to maximize effectiveness of public infrastructure.</p> <p>Justification:</p> <p>Replacing and/or adjusting aging infrastructure in conjunction with other agencies planned street work is the most cost effective approach to infrastructure management.</p>															
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 35%; text-align: left; padding: 5px;">Funding Information:</th> <th style="width: 15%; text-align: left; padding: 5px;">Acquisition Year:</th> <th style="width: 15%; text-align: left; padding: 5px;">Design Year:</th> <th style="width: 35%; text-align: left; padding: 5px;">Construction Year:</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Amounts shown are estimated costs without projected inflation.</td> <td></td> <td style="text-align: center; padding: 5px;">2019</td> <td style="text-align: center; padding: 5px;">2019</td> </tr> <tr> <td style="padding: 5px;"></td> <td style="text-align: center; padding: 5px;">\$0</td> <td style="text-align: center; padding: 5px;">\$0</td> <td style="text-align: center; padding: 5px;">\$16,900,000</td> </tr> </tbody> </table>				Funding Information:	Acquisition Year:	Design Year:	Construction Year:	Amounts shown are estimated costs without projected inflation.		2019	2019		\$0	\$0	\$16,900,000
Funding Information:	Acquisition Year:	Design Year:	Construction Year:												
Amounts shown are estimated costs without projected inflation.		2019	2019												
	\$0	\$0	\$16,900,000												

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-00277		
Project:	E-20 Wurzbach: Jones Maltsberger to Nacogdoches		
Programmed Amount:	\$22,616,000		
Core Business:	WW - Wastewater		
Category:	Main Replacement - Sewer		
Phase:	Construction		
Council District:	District 09, District 10		
Description and Scope:			
<p>The E-20 Wurzbach: Jones Maltsberger to Nacogdoches project consists of constructing approximately five miles of 15-inch to 60-inch wastewater mains that carry up to 65 MGD of wastewater. The mains are located in the Eastern Basin along Salado Creek between Nacogdoches Road and Jones Maltsberger Road and collect wastewater from Stone Oak and the northeastern service area around Redland and Bulverde Roads. Lift stations 11 and 111 that flow into this main will be eliminated via a separate project.</p>			
Justification:			
<p>The E-20 Wurzbach: Jones Maltsberger to Nacogdoches project is needed to correct capacity deficiencies in the existing sanitary sewer infrastructure.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.	2017	2017	2019
	\$267,511	\$0	\$22,000,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-00397		
Project:	E-54: Cibolo Vista to Bulverde		
Programmed Amount:	\$968,376		
Core Business:	WW - Wastewater		
Category:	Main Replacement - Sewer		
Phase:	Design		
Council District:	District 10, OCL		
Description and Scope:			
Extend 28,000 feet of 21 and 30-inch main from the upstream end of planned project E-4 located 1,500 feet east of Bulverde Road and immediately north of 1604 to Fossil Ridge LS located 1,000 feet east of TPC Parkway.			
Justification:			
Alleviate capacity constraints due to upstream growth. Phases 2, 3 and 4 are planned for construction in 2021, 2022 and 2024.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2021
	\$0	\$942,000	\$9,700,500

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-00240		
Project:	Main Replacements - Sewer - SAWS Crews - 2019		
Programmed Amount:	\$3,598,000		
Core Business:	WW - Wastewater		
Category:	Main Replacement - Sewer		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
Replacement of sewer mains by SAWS crews. 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.			
Justification:			
The replacement work is necessary to restore service and is required to comply with the EPA Consent Decree.			
Funding Information:			
	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2019
	\$0	\$0	\$3,500,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-00248		
Project:	Sewer Laterals - 2019		
Programmed Amount:	\$4,626,000		
Core Business:	WW - Wastewater		
Category:	Main Replacement - Sewer		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
<p>Replace deteriorated customer sewer upper laterals from the sewer main to the customer's property line. Each year SAWS crews replace customer sewer upper laterals when televising or reported problems indicate the lateral has become unserviceable.</p>			
Justification:			
<p>Replacement of sewer upper laterals is necessary to restore service and reduces inflow and infiltration, which reduces sewer overflows, and is required by the EPA Consent Decree.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2019
	\$0	\$0	\$4,500,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-00258		
Project:	Small and Large Diameter Condition Remedial Measures 2019		
Programmed Amount:	\$42,711,200		
Core Business:	WW - Wastewater		
Category:	Main Replacement - Sewer		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
<p>Rehabilitate sewer mains that have been identified by televised inspection to be in poor condition. This project will fund the rehabilitation of approximately 40 miles of small and 5 miles of large diameter sewer mains. 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.</p> <p>Each year, SAWS is required to inspect pipes to evaluate condition and to take necessary action to prevent sewer overflows.</p>			
Justification:			
Rehabilitation of the sewer system is required by the EPA Consent Decree. All condition work must be complete by July 23, 2023.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2019
	\$0	\$0	\$41,120,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-00086		
Project:	W-1 Leon Creek: Hwy 151 to Hwy 90		
Programmed Amount:	\$26,728,000		
Core Business:	WW - Wastewater		
Category:	Main Replacement - Sewer		
Phase:	Construction		
Council District:	District 06		
Description and Scope:			
<p>This project will construct about four miles of 78-inch and 84-inch gravity main in the Western Sewershed along Leon Creek from Highway 90 to an existing upsized line approximately one-half mile north of State Highway 151. This project will replace an aging and undersized sewer main which conveys more than 70% of the Western Sewershed's total flow to the treatment plant. The W-1 segment completes the undersized gap between a previously upsized section to the north and the existing W-6 project to the south which is currently under design.</p> <p>Construction is planned in two phases in 2019 at a total cost of \$26.0 million.</p>			
Justification:			
<p>This project is being upsized to handle peak wet weather sewer flows which are increasing as a result of an expanding upstream catchment area due to growth. The increase in sewer capacity will decrease the likelihood of Sanitary Sewer Overflows as required by the EPA.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2015	2019
	\$0	\$3,232,385	\$26,000,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-01150		
Project:	W-6: Hwy 90 to SW Military Drive Sewer Main		
Programmed Amount:	\$17,476,000		
Core Business:	WW - Wastewater		
Category:	Main Replacement - Sewer		
Phase:	Design		
Council District:	District 04, District 06		
Description and Scope:			
<p>The W-6 Upper Segment involves replacing aging and under-capacity sewer infrastructure that currently runs through Lackland Air Force Base. Environmental and jurisdictional challenges associated with the Air Force base have forced SAWS to evaluate numerous different alignments. Ultimately, the planned final alignment involves deep tunneling from a point near the intersection of Southwest (SW) Military Drive and Old Pearsall Road extending northwest along SW Military Drive to the intersection of SW Military Drive and U.S. Highway 90 where it turns east and proceeds east along U.S. Highway 90 to a point near the intersection of U.S. Highway 90 and South Callaghan Road.</p>			
Justification:			
<p>The W-6 is a major sewer pipeline carrying flows from the western sewershed. Sewer line challenges and sanitary sewer overflows (SSOs) in this area and upstream require remedial action in order to comply with the federal government's SSO Consent Decree.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2020
	\$0	\$17,000,000	\$190,000,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-00253		
Project:	Wastewater Main Replacement Work Order Engineering Contract - 2019		
Programmed Amount:	\$4,112,000		
Core Business:	WW - Wastewater		
Category:	Main Replacement - Sewer		
Phase:	Design		
Council District:	System Wide		
Description and Scope:			
<p>This annual project will fund design services to repair/replace sewer mains based on internal prioritization. These projects vary in size and location and may require the solicitation of contractor construction services. These projects will be constructed to correct unsanitary conditions in order to ensure public health and safety. This project includes \$200,000 for a cost estimating contract for wastewater construction projects.</p>			
Justification:			
Design of replacement/repair mains is necessary to restore and maintain wastewater service.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2019
	\$0	\$4,000,000	\$0

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-11049		
Project:	Dos Rios WRC Headworks Enhancements Phase 2		
Programmed Amount:	\$1,542,000		
Core Business:	WW - Wastewater		
Category:	Treatment		
Phase:	Construction		
Council District:	District 03		
Description and Scope:			
<p>The existing grit removal system is ineffective in removing grit from the raw wastewater. An in-depth assessment of the grit chambers, grit pumps and grit washer/classifier units will be performed to determine the cause and, depending on the outcome of this investigation, a remedial design will be implemented.</p>			
Justification:			
<p>Proper operation of the grit removal system is vital in order to prevent premature wear and tear in the downstream equipment and grit deposition in the digesters. Grit deposition in digesters reduces digestion capacity and requires frequent digester cleaning, which in turn results in increases in annual maintenance cost.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.	2017	2017	2019
	\$0	\$0	\$1,500,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-00120		
Project:	Dos Rios WRC Electrical System Improvements – Phase 2		
Programmed Amount:	\$20,046,000		
Core Business:	WW - Wastewater		
Category:	Treatment		
Phase:	Construction		
Council District:	District 03		
Description and Scope:			
<p>Replace various plant electrical switchgear, motor control centers, transformers and generators that are aging, and in poor condition. All plant electrical equipment was assessed, evaluated and assigned a rating of 1 to 6, with 1 being in the poorest condition and 6 being in the best condition. The electrical equipment to be replaced in Phase 2 was deemed in poor condition by the Dos Rios WRC Electrical System Assessment project. Phase 2 will be constructed in 2019 at an estimated cost of \$19.5 million, and Phase 3 will be constructed in 2022 at an estimated cost of \$15 million. Phase 4 is planned for 2025 at \$10.5 million. The total cost of all four phases of the project is approximately \$60 million. This project will be constructed in tandem with the Leon Creek Electrical Switchgear project.</p>			
Justification:			
<p>The Dos Rios WRC has been in operation since 1987, and portions of the plant electrical equipment are beyond their useful life and need to be replaced to maintain system reliability.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2017	2019
	\$0	\$1,900,057	\$19,500,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10647		
Project:	Dos Rios WRC Sludge Drying Bed Improvements		
Programmed Amount:	\$1,799,000		
Core Business:	WW - Wastewater		
Category:	Treatment		
Phase:	Construction		
Council District:	District 03		
Description and Scope:			
<p>The sludge drying beds are used to dewater the sludge after the digestion process in conjunction with the belt filter presses. The 132 sludge drying beds at the Dos Rios WRC are more than 30 years old and in need of replacement. The project scope is to replace 10 to 15 beds per year over 2019-2021, with a similar but an up-to-date technology.</p>			
Justification:			
<p>The beds are more than 30 years old and in need of replacement due to loss of sand and severe deterioration of the underdrain systems. The treatment of solids is necessary to meet permit requirements. The drying beds provide an additional option for treatment.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.	2017	2019	2019
	\$0	\$0	\$1,750,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-11072		
Project:	Leon Creek Electrical Switchgear		
Programmed Amount:	\$4,626,000		
Core Business:	WW - Wastewater		
Category:	Treatment		
Phase:	Construction		
Council District:	District 03		
Description and Scope:			
<p>This project will replace the outdoor main incoming electrical switchgear, which is over 30 years old, at the Leon Creek Water Recycling Center (WRC). The main electrical switchgear supplies high voltage (4,160 volts) electrical power to the electrical distribution system and equipment for operation of the various wastewater treatment process areas of the plant. The new main electrical switchgear will be located in a new climate controlled electrical building. Both the new electrical switchgear and electrical building will be installed as part of this project. The new electrical building will be sized and constructed to set the foundation for future electrical switchgear replacements and upgrades to the aging electrical system. All work will comply with Federal, State and Local electrical codes.</p> <p>This project will be constructed in tandem with the Dos Rios Electrical Upgrades Phase 2 project. The future electrical switchgear replacements will be included on the Leon Creek WRC Improvements and Upgrades Phase 2 and Leon Creek WRC Electrical System Improvements projects.</p>			
Justification:			
<p>The Leon Creek WRC has been in operation since 1965, and portions of the plant electrical equipment are beyond their useful life and need to be replaced to maintain system reliability.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2018	2019
	\$0	\$0	\$4,500,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-00045		
Project:	Leon Creek WRC Improvements and Upgrades Phase 2		
Programmed Amount:	\$1,387,800		
Core Business:	WW - Wastewater		
Category:	Treatment		
Phase:	Design		
Council District:	District 03		
Description and Scope:			
<p>For the Leon Creek Water Recycling Center (WRC), this project provides for the design of:</p> <ul style="list-style-type: none"> -Upgrade/replacement of the existing preliminary treatment facilities (headworks) that are ineffective and corroded, and installation of new and up-to-date electrical, instrumentation and control systems. -Replacement of the existing non-potable water system (NPW) including the existing NPW pumps and the NPW piping throughout the plant, provide for the high pressures required for the existing equipment to work properly, and connect the pumps to the plant's backup power system. -Evaluation and restoration/replacement of the site paving that is in poor condition due to age and wear and tear. -Demolition of all structures and equipment that are old, corroded, and no longer needed. -Removal of the bottleneck in the junction box downstream of the final clarifiers so that the plant can treat its full peak flow capacity. -Correction of the hydraulic flow in Final Clarifier No. 5. 			
Justification:			
<p>Once fully implemented, this project will be the last project of a series of projects at Leon Creek WRC over the last few years. The plant's full capacity will be able to be used and the plant will be significantly upgraded after this project, requiring no future 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.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2020
	\$0	\$1,350,000	\$17,500,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10115		
Project:	Mitchell Lake Pilot Wetlands		
Programmed Amount:	\$1,233,600		
Core Business:	WW - Wastewater		
Category:	Treatment		
Phase:	Construction		
Council District:	District 03		
Description and Scope:			
<p>Construct a pilot project to test wetlands concept for improving the quality of Mitchell Lake discharged water. This project will bid the wetland pilot construction during the fall of 2018 for award in January 2019. The consultant will prepare the final recommendation report on the pilot results and dam improvements.</p>			
Justification:			
<p>The existing Dam was built in 1901 using soil, concrete & rebar from unknown sources, possibly from debris from floods in the area. SAWS plans to lower the normal operating level of the lake and to modify the dam and spillway so that the lake can store the extra volume of water from major stormwater events upstream, and we can slowly release the water to the proposed downstream wetlands. If we raise the level of the lake to store major stormwater events, we want to ensure that the dam has the structural integrity to handle the increased water pressure.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2018	2019
	\$0	\$0	\$1,200,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10807		
Project:	Treatment Facilities Engineering Work Order Contract 2019		
Programmed Amount:	\$514,000		
Core Business:	WW - Wastewater		
Category:	Treatment		
Phase:	Design		
Council District:	System Wide		
Description and Scope:			
<p>This annual contract will fund design services to evaluate, design and bid processes and associated equipment at SAWS treatment and recycle facilities that require rehabilitation, improvement, addition, demolition, replacement and expansion. These facilities include:</p> <ul style="list-style-type: none"> - wastewater treatment (water recycling centers) - recycle water pump stations (water recycling centers) - recycle water system (service area) - cooling (chilled water system downtown) - lift stations (SAWS service area) - odor control stations <p>The scope of design work will include, but is not limited to, geotechnical, potholing and subsurface utility investigations, surveying, permitting, public meetings/hearings attendance, environmental studies, preliminary engineering work for site/civil, structural, mechanical, electrical, instrumentation and control systems evaluation, recommendations and design, preparation of construction plans, specifications, cost estimates, construction schedules, assistance in bidding, construction phase services including review of contractor submittals, responding to requests for information, preparation of requests for proposals/change orders, contractor pay estimate reviews, attending construction progress meetings and walkthroughs, substantial and final completion inspections, and other related services as needed.</p>			
Justification:			
<p>The engineering design services contract is necessary to provide timely response to the process/equipment evaluation and design needs in the above facilities. A design work order will be issued upon identification of the projects that require rapid response. Services will be on an "as-needed" basis, and vary in size and location.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.	2016	2019	2020
	\$0	\$500,000	\$0

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WATER RESOURCES

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**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10811		
Project:	Automated Metering Infrastructure (AMI)		
Programmed Amount:	\$1,225,345		
Core Business:	WR - Water Resources		
Category:	Corporate WR		
Phase:	Design		
Council District:	System Wide		
Description and Scope:			
<p>First year of AMI implementation represents pilot program to evaluate the benefits of fully implementing AMI in subsequent years. Successful AMI implementation will have a significant impact on the SAWS meter to cash process. It will greatly improve SAWS ability to provide relevant and timely information to SAWS customers about their water usage, likely reducing water usage as a result of leaks on the customer side of the meter and improve conservation efforts. Improved meter registration will have a positive impact on Non-Revenue Water. The projected costs and benefits of this project have been allocated evenly between Water Delivery and Water Supply.</p>			
Justification:			
<p>The Business Case performed by West Monroe in 2017, calculated a net benefit of AMI of \$31M (NPV) over a 20 year term. The biggest impact on the benefits provided during the 20 year period is the assumed improved meter registration that results from replacing 100% of SAWS mechanical meters with static meters. While other operational improvements were assumed in the business case by utilizing the network to provide data, the vast majority of the positive results are from an assumed 2.5% improvement in meter registration.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.	2019	2019	2020 - 2023
	\$0	\$1,225,345	approx. \$85,000,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-00162		
Project:	General Legal Services - WR - 2019		
Programmed Amount:	\$339,240		
Core Business:	WR - Water Resources		
Category:	Corporate WR		
Phase:	Acquisition		
Council District:	System Wide		
Description and Scope:			
Specialized legal support is required for critical projects.			
Justification:			
External legal support is sought only when there is insufficient internal legal staff to support the effort, or specialized legal expertise is required.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.	2019	2019	2019
	\$330,000	\$0	\$0

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10808		
Project:	Water Supply Owner Controlled Construction Changes (OCCC) 2019		
Programmed Amount:	\$2,531,810		
Core Business:	WR - Water Resources		
Category:	Corporate WR		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
Funds earmarked to support change orders for approved CIP projects that would exceed original project appropriations.			
Justification:			
The availability of OCCC funds recognizes that unforeseen cost changes can occur in the execution of CIP projects. Change orders valued above \$100,000 must be approved by the SAWS Board of Trustees.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2016	2019
	\$0	\$0	\$2,462,850

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-11094		
Project:	Water Resources Overhead 2019		
Programmed Amount:	\$3,000,000		
Core Business:	WR - Water Resources		
Category:	Corporate WR		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
<p>Overhead costs cover the direct costs associated with SAWS personnel who manage CIP projects, in addition to the indirect costs associated with SAWS personnel who support the CIP program during the capitalizable phases of the projects. Overhead costs were in part estimated based on time entered by SAWS CIP project management and support personnel during 2018 into the SAWS CIP Time Tracker system. Other factors included in the estimate of overhead costs are support to prior year CIP programs and estimated support to future CIP implementation.</p>			
Justification:			
<p>Overhead costs are applied to SAWS personnel costs in order to capture direct incremental costs associated with SAWS personnel that support the development and construction of CIP projects.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2018	2019
	\$0	\$0	\$3,000,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-11122		
Project:	Brackish Desalination Conversion of Test Well No.1		
Programmed Amount:	\$2,588,316		
Core Business:	WR - Water Resources		
Category:	Desalination		
Phase:	Construction		
Council District:	OCL		
Description and Scope:			
<p>This project includes converting the desalination plant's Test Well No. 1 with all mechanical, electrical, instrumentation and controls, Supervisory Control and Data Acquisition (SCADA) Control and well head improvements from Well No. 10. This project will also provide for the construction of approximately 12,000 feet of interconnect pipeline between the converted brackish groundwater Test Well No. 1 and the brackish wells collector line to boost the capacity of source water to the desalination plant.</p>			
Justification:			
<p>The new well will help to offset the capacity lost due to decline in brackish aquifer surface elevation in the past two years and the impact of well drawdown caused by low transmissivity of the aquifer formation.</p> <p>The desalination plant is designed to operate at the peak treatment capacity of 12 million gallons per day (MGD). Currently, due to lowering of the brackish aquifer surface water elevation, the yield has declined and must be offset by additional sources. This project, in conjunction with the Brackish Desalination Well Addition No. 14 project, will provide for an additional 2,000 AF of brackish ground water to be treated at desalination plant.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.	2019	2018	2019
	\$0	\$0	\$2,517,817

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-11121		
Project:	Brackish Desalination Well Addition No.14		
Programmed Amount:	\$4,889,709		
Core Business:	WR - Water Resources		
Category:	Desalination		
Phase:	Construction		
Council District:	OCL		
Description and Scope:			
<p>This project includes drilling a new well at the desalination plant with all mechanical, electrical, instrumentation and controls, Supervisory Control and Data Acquisition (SCADA) Control and well head improvements. This project will also provide for the construction of approximately 5,500 feet of interconnect pipeline between the new brackish groundwater Well No. 14 and the brackish wells collector line to boost the capacity of source water to the desalination plant.</p>			
Justification:			
<p>The new well will help to offset the capacity lost due to decline in brackish aquifer surface elevation in the past 2 years and the impact of well drawdown caused by low transmissivity of the aquifer formation.</p> <p>The desalination plant is designed to operate at the peak treatment capacity of 12 million gallons per day (MGD). Currently, due to lowering of the brackish aquifer surface water elevation, the yield has declined and must be offset by additional sources. This project, in conjunction with the Brackish Desalination Conversion of Test Well No. 1 project, will provide for an additional 2,000 AF of brackish ground water to be treated at the desalination plant.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2019
	\$0	\$0	\$4,756,526

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-10728		
Project:	Central Water Integration Pipeline – Agua Vista Station		
Programmed Amount:	\$52,428,000		
Core Business:	WR - Water Resources		
Category:	Vista Ridge Integration		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
<p>The Central Water Integration Pipeline – Agua Vista Station includes a new water treatment plant with a capacity of 45 million gallons per day and a new pump station with a capacity of 20 million gallons per day that will serve Stone Oak. At this facility, potable water received through the Vista Ridge Regional Supply Project will be polished to match the water quality of the Edwards Aquifer and to ensure compatibility with the existing SAWS water distribution system in the central corridor from Stone Oak all the way to the Olmos Basin area. The treatment facility will include chemical dosing systems to increase levels of calcium and alkalinity, pressure filters to reduce turbidity and associated backwash recovery, on-site sodium hypochlorite generation for disinfection, and a fluoride feed system to meet City of San Antonio requirements. Residuals from pressure filter backwash will be thickened and disposed of through a solids handling process train.</p>			
Justification:			
<p>The Central Water Integration Pipeline project will help meet the expected growth of 20,000 new people every year in San Antonio and will be the largest non-Edwards Aquifer water supply in San Antonio's history. This project will increase our water supply portfolio by 20% of current demand. SAWS began the construction phase of the eight projects under the Central Water Integration Pipeline umbrella in 2018 with completion planned for early 2020 when the Vista Ridge water supply comes online. This amount is needed to fully fund construction.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2017	2019
	\$0	\$0	\$51,000,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-11123		
Project:	Purchase of Edwards Aquifer Rights		
Programmed Amount:	\$1,362,100		
Core Business:	WR - Water Resources		
Category:	Edwards		
Phase:	Acquisition		
Council District:	System Wide		
Description and Scope:			
<p>This project involves the permanent acquisition of Edwards Aquifer water rights as well as the legal services needed to complete the purchase. The 2017 Water Management Plan (WMP) identifies purchasing water rights as an option for the maintenance of Edwards supply long term. SAWS purchased 40 acre-feet of Edwards water rights in 2018 for a total of \$200,000.</p>			
Justification:			
<p>Although the 2017 WMP identifies a reduced total Edwards inventory, a large volume of water rights lease maintenance activity is still required. Purchasing Edwards water rights will help offset any uncertainties in the leasing market.</p> <p>Assuming purchases of \$5,000/AF, this amount of money will acquire 260 AF. Going out with a bid process could drive the price per acre foot down bringing in greater quantities of water.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.	2019		
	\$1,325,000	\$0	\$0

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

<u>PROJECT OVERVIEW</u>			
Project ID:	Pro-00144		
Project:	Recycled Water Customer Lines - 2019		
Programmed Amount:	\$205,600		
Core Business:	RW - Recycled Water		
Category:	Recycled Water		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
Provide recycled water to customers for irrigation, cooling towers, and industrial uses.			
Justification:			
Providing recycled water avoids the use of potable water sources.			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2019	2019
	\$0	\$0	\$200,000

**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-11095		
Project:	Recycled Water Overhead 2019		
Programmed Amount:	\$225,000		
Core Business:	RW - Recycled Water Recycled		
Category:	Recycled Water		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
<p>Overhead costs cover the direct costs associated with SAWS personnel who manage CIP projects, in addition to the indirect costs associated with SAWS personnel who support the CIP program during the capitalizable phases of the projects. Overhead costs were in part estimated based on time entered by SAWS CIP project management and support personnel during 2018 into the SAWS CIP Time Tracker system. Other factors included in the estimate of overhead costs are support to prior year CIP programs and estimated support to future CIP implementation.</p>			
Justification:			
<p>Overhead costs are applied to SAWS personnel costs in order to capture direct incremental costs associated with SAWS personnel that support the development and construction of CIP projects.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2018	2019
	\$0	\$0	\$225,000

CHILLED WATER

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**SAN ANTONIO WATER SYSTEM
2019 CAPITAL IMPROVEMENT PROGRAM
PROJECT DATA SHEET**

PROJECT OVERVIEW			
Project ID:	Pro-11096		
Project:	Chilled Water Overhead 2019		
Programmed Amount:	\$125,000		
Core Business:	CW - Chilled Water		
Category:	Chilled Water		
Phase:	Construction		
Council District:	System Wide		
Description and Scope:			
<p>Overhead costs cover the direct costs associated with SAWS personnel who manage CIP projects, in addition to the indirect costs associated with SAWS personnel who support the CIP program during the capitalizable phases of the projects. Overhead costs were in part estimated based on time entered by SAWS CIP project management and support personnel during 2018 into the SAWS CIP Time Tracker system. Other factors included in the estimate of overhead costs are support to prior year CIP programs and estimated support to future CIP implementation.</p>			
Justification:			
<p>Overhead costs are applied to SAWS personnel costs in order to capture direct incremental costs associated with SAWS personnel that support the development and construction of CIP projects.</p>			
Funding Information:	Acquisition Year:	Design Year:	Construction Year:
Amounts shown are estimated costs without projected inflation.		2018	2019
	\$0	\$0	\$125,000