

SAN ANTONIO WATER SYSTEM



# capital improvement Projects



Calendar Year 2004



**CY 2004  
Capital  
Improvement  
Program**

San Antonio Water System  
April 6, 2004

**San Antonio Water System  
2004 Capital Improvement Program**

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Central Plant - Replace/Rebuild 2 Boilers	Construction	\$ 1,800,000	1	
Kelly USA - Replace Fill Material in Cooling Tower # 3 Bldg 356	Construction	\$ 160,000	1	
<b>Total</b>		<b>\$ 2,060,000</b>		
Allocated Overhead and Contingency		\$ 247,200		
<b>Total</b>		<b>\$ 2,307,200</b>		
<b>WASTEWATER PROGRAM</b>				
<b>BUILDINGS-WASTEWATER</b>				
New Laboratory	Construction	\$ 2,150,000	2	
Northwest Service Center Build Out	Construction	\$ 1,000,000	2	
<b>Total</b>		<b>\$ 3,150,000</b>		
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Texas Research Park Transfer Main Lift Stations	Design	\$ 20,000	3	M-2
Texas Research Park Transfer Main Lift Stations	Construction	\$ 100,000	3	M-2
<b>Subtotal</b>		<b>\$ 4,270,000</b>		
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EARZ Televising, Testing & Repairs Program	Design	\$ 500,000	4	M-5
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Kelly USA System Improvements	Construction	\$ 100,000	5	
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San Fernando Sewer Replacement Phase II	Construction	\$ 1,194,496	6	M-6
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Valley Ridge Mobile Home Park Sewer Replacement	Design	\$ 100,000	7	M-7
<b>Subtotal</b>		<b>\$ 26,244,496</b>		

Project Title	Cost Element	Budget	Page No.	Map No.
<b>TREATMENT</b>				
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Dos Rios WRC Consolidate and Improve De-Watering	Construction	\$ 2,500,000	7	
Dos Rios WRC Grit Control	Construction	\$ 2,000,000	7	
Dos Rios WRC Grit Control	Design	\$ 200,000	7	
Dos Rios WRC Install Beneficial Gas Utilization System	Construction	\$ 1,300,000	8	
Dos Rios WRC Intercom and Building Rehabilitation	Construction	\$ 200,000	8	
Dos Rios WRC Rerating - Phase I	Design	\$ 250,000	8	
Emergency Treatment Plant Repairs Annual Fund	Construction	\$ 1,800,000	9	
Leon Creek WRC Improvements	Design	\$ 200,000	9	
Medio Creek WRC Expansion	Design	\$ 2,400,000	9	
Salado Treatment Plant Closure	Construction	\$ 100,000	10	
Salado WRC DCS Headwork Improvements	Design-Const	\$ 1,250,000	10	
WRC Large Equipment Monitoring and Replacement Program	Construction	\$ 500,000	10	
<b>Subtotal</b>		<b>\$ 12,840,000</b>		
<b>Grand Total Wastewater</b>		<b>\$ 58,504,496</b>		
<b>WATER DELIVERY PROGRAM</b>				
<b>BUILDINGS-WATER</b>				
New Laboratory	Construction	\$ 2,150,000	11	
Northwest Service Center Build Out	Construction	\$ 1,000,000	11	
<b>Subtotal</b>		<b>\$ 3,150,000</b>		
<b>DISTRIBUTION</b>				
Bandera Rd Pressure Zone 7 Water Main	Design	\$ 320,000	11	M-8
Blanco to Errol 24" Water Main	Construction	\$ 3,000,000	12	M-9
FM 1937: Loop 410 - Pleasanton	Design	\$ 535,000	12	M-10
Lincoln Heights Main Improvements and Pressure Zone Change	Design	\$ 250,000	12	M-11
Marnoch from Scenic Loop to Rafter South Trail Water Main	Design	\$ 250,000	13	M-12
Meter Replacement Annual Fund	Construction	\$ 450,000	13	
Old Pearsall Rd. from Medina Base Rd. to Military Drive Water Main	Design	\$ 60,000	13	M-13
Oversize Water Mains	Construction	\$ 1,500,000	14	
Reinforcing Mains/Misc Service Level Changes Annual Fund	Construction	\$ 586,000	14	
<b>Subtotal</b>		<b>\$ 6,951,000</b>		
<b>GOVERNMENTAL PROGRAM- WATER</b>				
<b>Governmental Relocations/Replacements - Water</b>	Construction	\$ 15,000,000	14	M-3

Project Title	Cost Element	Budget	Page No.	Map No.
<b>MAIN REPLACEMENTS-WATER</b>				
Main Replacements-Interfund Transfer-Water	Construction	\$ 2,000,000	15	
Miscellaneous Main Replacements - Water - CIP	Construction	\$ 400,000	15	
San Fernando Water Replacement Phase I	Construction	\$ 322,165	15	M-14
San Fernando Water Replacement Phase II	Construction	\$ 1,194,496	16	M-15
Unspecified Design Services - Water	Design	\$ 200,000	16	
Utility Acquisitions - Water Replacements	Design	\$ 200,000	16	
Valley Ridge Mobile Home Park Water Replacement	Construction	\$ 1,000,000	17	M-16
Valley Ridge Mobile Home Park Water Replacement	Design	\$ 100,000	17	M-16
<b>Subtotal</b>		<b>\$ 5,416,661</b>		
<b>PRODUCTION</b>				
Cibolo Tank	Design	\$ 300,000	17	M-17
Emergency Production Replacements Annual Fund	Construction	\$ 800,000	17	M-18
Micron Pump Station - Phase II	Construction	\$ 2,700,000	18	
Real Estate/Easement Acquisition	Acquisition	\$ 1,000,000	18	
Water Facilities Upgrades Program	Design	\$ 330,000	18	M-19
Water Facilities Upgrades Program	Construction	\$ 3,800,000	18	M-19
Water Facility Demolition and Well Plugging Program	Construction	\$ 200,000	19	M-20
Water Facility Demolition and Well Plugging Program	Design	\$ 50,000	19	M-20
<b>Subtotal</b>		<b>\$ 9,180,000</b>		
<b>Grand Total Water Delivery</b>		<b>\$ 39,697,661</b>		
<b>TOTAL WATER/WASTEWATER</b>		<b>\$ 98,202,157</b>		
Allocated Overhead @10%		\$ 9,820,216		
2% Contingency		\$ 1,977,627		
<b>GRAND TOTAL WATER/WASTEWATER</b>		<b>\$110,000,000</b>		
<b>WATER SUPPLY</b>				
Aquifer Storage and Recovery Phase II Inside Bexar County (30MGD)	Construction	\$ 16,647,000	20	
Aquifer Storage and Recovery System Integration	Construction	\$ 12,386,020	20	
Edwards Groundwater Purchase	Acquisition	\$ 16,000,000	20	
Enterprise Resource Planning Project	Design	\$ 2,100,000	21	
Lower Guadalupe River Acquisitions	Acquisition	\$ 2,168,100	21	
Lower Guadalupe River Acquisitions	Design	\$ 3,425,400	21	
Oliver Ranch	Construction	\$ 3,000,000	21	
Recycle Program	Construction	\$ 1,500,000	22	
Western Gonzales County Phase I	Acquisition	\$ 4,980,400	22	
Western Gonzales County Phase I	Design	\$ 20,483,000	22	
Western Gonzales County Phase II	Design	\$ 1,000,000	22	
Regional Western Gonzales/Carrizo Integration	Construction	\$ 4,100,000	23	
Watershed Protection Sensitive Land	Acquisition	\$ 3,000,000	23	
West Canyon	Construction	\$ 4,000,000	23	
<b>Total( Includes Contingency and Overhead)</b>		<b>\$ 94,789,920</b>		
<b>Total Capital Improvement Program</b>		<b>\$ 207,097,120</b>		

## **Introduction**

The San Antonio Water System (SAWS) serves approximately 292,424 customers in the San Antonio area. SAWS delivers potable groundwater from the Edwards Aquifer to domestic, commercial, industrial, governmental and agricultural customers. SAWS also collects, conveys and processes recycled water and wastewater generated in the service area. Heating and cooling plants owned and operated by SAWS generate steam and chilled water for customers in the Central Business District, Brooks City Base and Kelly USA.

The Capital Improvement Program (CIP) is the multi-year plan for implementing projects that support water supply and delivery, wastewater collection and treatment and heating and cooling requirements in the SAWS service area. The CIP is a financial planning and management tool that identifies facility and equipment requirements and schedules them for funding and implementation.

The Capital Improvement Program is comprised of four core businesses: Heating and Cooling, Water Delivery, Wastewater and Water Supply.

On December 16, 2003 the Board approved full funding for the Water Supply and Heating and Cooling utilities and partial funding for the Water Delivery and Wastewater utilities CIP. Water Supply was funded at \$94.8 million. Heating and Cooling was funded at \$2.3 million and Water Delivery and Wastewater were funded at \$19.2 million.

Total requirements for the 2004 Water Delivery and Wastewater components of the capital improvement program are \$110 million. On February 12, 2004 the San Antonio City Council approved a rate increase which generates funds needed to support the \$110 million in capital improvement requirements for Water Delivery and Wastewater utilities in CY04.

The December 16, 2003 Board Resolution was amended by allocating funds generated by the rate increase to the CY04 CIP resulting in a total CIP of \$207 million. The water and wastewater component of the program totals approximately \$110 million. The Water Supply Core Business is funded for \$94.7 million and the Heating and Cooling Core Business totals approximately \$2.3 million.

The Heating and Cooling Program is self-funded through revenues generated from customers. The Water Supply Program funds the development of long term water supplies from surface and alternative groundwater sources through a fee assessed to ratepayers

The Water Delivery/Wastewater CIP funds the expansion, improvement and replacement of infrastructure required to generate, deliver, collect and treat water and wastewater in the SAWS service area. The water and wastewater components of the annual CIP are funded for 110 million through bonds, revenues and impact fees.

Funding for the CY04 water delivery and wastewater collection and treatment program is 75% repairs and replacements and 25% additional capacity to support new growth and development. The CY04 program provides more spending on repairs and replacements and the wastewater infrastructure than previous programs.

CIP projects were generated by Treatment, Planning, Programming and Quality Control and Operations. The Executive Group, consisting of the submitting Vice Presidents, reviewed and prioritized all known requirements for the budget year to insure that the highest priority problems are addressed in a timely manner given funding limitations. Criteria used to prioritize projects also included project coordination, savings to the annual Maintenance and Operations budget, improved customer service, regulatory mandates, criticality, priority in relation to other projects and availability of funds.

## **CY04 Capital Improvement Program Summary**

### **Heating and Cooling Program**

The San Antonio Water System operates and maintains nine heating & cooling facilities located at various locations within the City of San Antonio (COSA). The Central heating & cooling plant located on E. Commerce was constructed in 1967. This plant provides cooling and heating requirements to facilities owned by COSA, other governmental agencies and commercial businesses.

In December 2000, SAWS' Heating and Cooling Department acquired six additional heating & cooling facilities at Kelly USA as a result of the base closure/realignment decision made in 1995. In 2001, the construction of a new 4,000-ton plant was completed at South Cherry Street. This plant was connected to the chilled water distribution system to handle any additional loads as a result of the convention center expansion project. In February 2002 an interim agreement was reached between Brooks Development Authority and SAWS to operate the central heating and cooling plants and two other small cooling facilities at Brooks City Base.

Due to the age and condition of the newly acquired plants at the Kelly USA site and the Central Plant on Commerce Street, projects have been initiated to insure safe, dependable and efficient operation of critical equipment. These projects are required to keep equipment operating at optimum performance, to maintain operational efficiency and to insure reliable service to SAWS' heating and cooling customers

### **Water Delivery Program**

Currently, the Water Delivery system relies on groundwater from the Edwards Aquifer to supply water to the SAWS service area. The Water Delivery system delivers ground water to customers through elevated and ground storage tanks, pump stations and transmission and distribution mains. The system consists of approximately 4,000 miles of transmission and distribution mains, 14 primary and 21 secondary pump stations, 25 booster stations and 56 elevated and ground storage tanks.

The Water Delivery CIP includes programs and projects designed to expand and improve water production, storage and transmission facilities in the SAWS service area.

The 2004 CIP Water Delivery program includes the design and construction of projects to address critical low pressure and low flow areas that could potentially lead to loss of property and human life in the event of a fire. The 2004 CIP funds Water Master Plan projects proposed to ensure that potable water is delivered in a timely manner to meet growth within the SAWS service area and maintains the implementation schedule for water production, distribution, and storage facility improvements recommended in the 1998 Water Infrastructure Plan. The upgrade, replacement and rehabilitation of production facilities to maintain system integrity and meet TCEQ requirements are also programmed

### **Wastewater Collection and Treatment Program**

The SAWS Wastewater Collection and Treatment system consists of approximately 4,790 miles of sanitary sewer mains, 107 lift stations and 4 major wastewater treatment plants. The Wastewater CIP consists of programs and projects which upgrade and rehabilitate the wastewater collection and treatment system and increase capacity to allow for the future growth of the system.

Collection system projects funded in 2004 will reduce flows to the Leon Creek Water Recycling Center and add capacity in the Far West area.

The wastewater treatment component of the 2004 CIP consists of projects which will replace or upgrade aging components and processes at the treatment plants. The design of the expansion of the Medio Water Recycling Center from 8.5 to 15 MGD is also funded.

### **Water Supply Program**

An initiative to develop long term water supplies from surface and alternative groundwater sources began in 1998 and has been programmed into a twenty year plan. The Water Supply Core Business includes water supply development, water treatment and water transmission projects. In 2004, funding from the water supply fee will be used to design recharge structures over the Edwards Aquifer Recharge Zone (EARZ). These structures will allow water to infiltrate the Edwards Aquifer providing additional water supply. Phase II of the infrastructure necessary to integrate Aquifer Storage and Recovery water into the SAWS system will be constructed in 2004. This project will construct the second phase of the wellfield, pipelines and treatment plant to develop additional storage capacity in southern Bexar County. Funding is provided to continue purchasing or leasing Edwards groundwater rights and water rights from residents in Gonzales County where production facilities will be constructed to take water from the Carrizo Aquifer and integrate it into the SAWS system. Additionally, SAWS will coordinate with the City of San Antonio on supplementing the purchase of Sensitive Recharge Zone land over the Edwards Aquifer Recharge Zone.

## Funding

Several sources are used to finance SAWS capital improvements; these sources include: revenues, revenue bonds, tax –exempt commercial paper (TECP), and capital recovery fees (impact fees and others). Funds from these sources are accounted for in the Renewal and Replacement Fund and the Project Fund, two SAWS funds that are described below. In addition, SAWS is actively pursuing grant funds from State and Federal sources.

### Renewal and Replacement Fund:

Rate-based revenues and capital recovery fees collected from customers and developers are recorded in the Renewal and Replacement Fund. This fund is primarily used to finance property, plant and equipment construction, and system improvements.

### Revenues:

All revenues of the System are used to meet requirements according to a specific schedule of priorities as dictated by Ordinance No. 75686, which created the San Antonio Water System. After covering maintenance and operations expenses and debt service, revenues are available for distribution to the City of San Antonio’s General Fund and the SAWS Renewal and Replacement Fund. Any revenues in excess of those obligated to the City of San Antonio are available for SAWS Renewal and Replacement Fund.

### Capital Recovery Fees:

The System fees are designed to recoup the costs of capital expenditures to meet the needs of new customers. These include impact fees that are collected in accordance with Chapter 395 of the Local Government Code and connection fees. Expenditure of impact fees can only fund projects attributable to development.

### Project Fund:

This fund accounts for proceeds from the System’s capital debt of both tax-exempt commercial paper and revenue bonds.

### Revenue Bonds and Tax-Exempt Commercial Paper (TECP):

Revenue bonds and TECP are primarily used to finance construction projects. SAWS established a tax-exempt commercial paper program in November 1996 at an authorized amount of \$175 million. SAWS expects to expand the TECP program during 2002-2005 utilizing up to approximately 350 million to finance capital projects.

Table 1 shows the CY04 CIP budget and sources of funding for the CY04 program.

**Table 1.**  
***San Antonio Water System***  
***CY04 CIP***

	<u>Water Supply</u>	<u>Water Delivery</u>	<u>Wastewater</u>	<u>Chilled Water</u>	<u>Total</u>
Revenue	\$8,600,000	\$2,000,567	\$2,016,249	\$2,307,200	\$14,924,016
Impact Fees	\$3,000,000	\$6,345,584	\$7,471,323	\$0	\$16,816,906
Bonds	\$78,189,920	\$0	\$0	\$0	\$78,189,920
TECP	\$5,000,000	\$36,120,721	\$56,045,557	\$0	\$97,166,277
TWDB	\$0	\$0	\$0	\$0	\$0
	<u>\$94,789,920</u>	<u>\$44,466,871</u>	<u>\$65,533,128</u>	<u>\$2,307,200</u>	<u>\$207,097,120</u>