



*Regional. Reliable. Everyday.*

September 28, 2022

Ms. Jana Shelton  
City Manager  
City of Crandall  
P.O. Box 277  
Crandall, Texas 75114

RE: 2022-23 ANNUAL BUDGET CHARGES

Dear Ms. Shelton:

The 2022-23 Annual Budget was approved by the NTMWD Board of Directors at the September 2022 Board Meeting. The 2022-23 Annual Budget ensures NTMWD remains committed to our core mission of providing high quality and dependable water, wastewater and solid waste services in a cost efficient manner.

The water rate is being adjusted from \$3.04 to \$3.44 per 1,000 gallons and the excess water rate is being adjusted from \$0.65 to \$0.86 per 1,000 gallons due to higher chemical and electric power costs. Additional debt service costs for funding essential capital projects is also contributing to the overall budget increase. Enclosed are the 2022-23 Budget Summary and Billing Schedules for the following charges:

- Kaufman 4-1 Water Distribution Facilities - Water \$ 664,799.17
- Kaufman 4-1 Water Distribution Facilities - O&M \$ 52,405.87

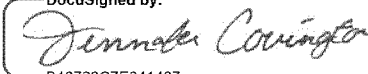
NTMWD staff continues to seek efficiencies and innovations to manage the costs of the capital program, operations and maintenance, and by working with the cities served to identify and implement effective and efficient solutions. Adequate funding and resources are required to deliver these projects on time and within budget as well as to integrate into existing system operations. The approved FY23 Budget addresses these challenges and responsibilities to continue providing safe, reliable water, wastewater and solid waste services for the millions of North Texans counting on us today and in the future.

Also enclosed is the FY23 Budget and Rates Fact Sheet. This summary provides an overview of the FY23 Budget and System Expenditures, key details and projects by services and highlights of program efficiencies and managing costs.

Ms. Jana Shelton  
September 28, 2022  
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At your convenience, you may visit our website, [www.ntmwd.com](http://www.ntmwd.com), for additional Financial Transparency information and to view past committee meeting presentations. Should you have any questions or need additional information, please contact Jeanne Chipperfield, Deputy Director - Administrative Services, by email at [jchipperfield@ntmwd.com](mailto:jchipperfield@ntmwd.com).

Sincerely,

DocuSigned by:  
  
B48722C7E841467...  
JENNAFER P. COVINGTON  
Executive Director

JPC/JC/EAF/DTF/kar  
Enclosures

## Kaufman Four-One Water Distribution Facilities

Revenues and Expenses	2020-21	2021-22	2021-22	2022-23	Variance \$	Variance %
	Actual	Original Budget	Amended Budget	Proposed Budget	To Original Budget	To Original Budget
<b>Revenues</b>						
Sewer Sales:						
Water Facilities: College Mound	\$ 19,278	\$ 23,561	\$ 22,264	\$ 26,242	\$ 2,681	11.38%
Water Facilities: City of Crandall	35,170	42,984	44,461	52,406	9,422	21.92%
Water Facilities: Gastonia-Scurry	45,261	55,317	53,104	62,593	7,276	13.15%
Water Facilities: Rose Hill	6,941	8,483	8,016	9,448	965	11.38%
Total Sewer Sales	\$ 106,650	\$ 130,345	\$ 127,845	\$ 150,690	\$ 20,345	15.61%
Total Other Revenues	\$ 44,796	\$ -	\$ -	\$ -	\$ -	0.00%
Interest Income	\$ 8	\$ 5	\$ 5	\$ 5	\$ -	0.00%
<b>Total Revenues</b>	<b>\$ 151,454</b>	<b>\$ 130,350</b>	<b>\$ 127,850</b>	<b>\$ 150,695</b>	<b>\$ 20,345</b>	<b>15.61%</b>
<b>Expenses</b>						
Supplies:						
Other	\$ 8,374	\$ 27,460	\$ 27,460	\$ 33,460	\$ 6,000	21.85%
Total Supplies	\$ 8,374	\$ 27,460	\$ 27,460	\$ 33,460	\$ 6,000	21.85%
Services:						
Insurance	\$ 732	\$ 935	\$ 935	\$ 1,085	\$ 150	16.04%
Maintenance	300	9,750	9,750	8,450	(1,300)	-13.33%
Power	119,381	40,000	37,500	45,000	5,000	12.50%
Shared Services	22,490	41,560	41,560	51,920	10,360	24.93%
Other	178	140	140	275	135	96.43%
Total Services	\$ 143,080	\$ 92,385	\$ 89,885	\$ 106,730	\$ 14,345	15.53%
Escrow	\$ -	\$ 10,505	\$ 10,505	\$ 10,505	\$ -	0.00%
<b>Total Expenses</b>	<b>\$ 151,454</b>	<b>\$ 130,350</b>	<b>\$ 127,850</b>	<b>\$ 150,695</b>	<b>\$ 20,345</b>	<b>15.61%</b>
<b>Net Revenues</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0.00%</b>

# SMALL SYSTEMS

## NORTH TEXAS MUNICIPAL WATER DISTRICT

### Kaufman Four-One Water Distribution Facilities

Member City Charges	2020-21		2021-22		2022-23	
	Actual	Original Budget	Amended Budget	Proposed Budget		
College Mound	\$ 19,278	\$ 23,561	\$ 22,264	\$ 26,242		
Crandall	35,170	42,984	44,461	52,406		
Gastonia Scurry	45,261	55,317	53,104	62,593		
Rose Hill	6,941	8,483	8,016	9,448		
<b>Total</b>	<b>\$ 106,650</b>	<b>\$ 130,345</b>	<b>\$ 127,845</b>	<b>\$ 150,690</b>		
<b>Annual Flow (1,000):</b>						
College Mound	100,447	100,447	100,447	96,773	17.415%	17.415%
Crandall	183,252	183,252	200,592	193,256	34.777%	34.777%
Gastonia Scurry	235,831	235,831	239,586	230,824	41.538%	41.538%
Rose Hill	36,165	36,165	36,165	34,843	6.270%	6.270%
<b>Total</b>	<b>555,695</b>	<b>555,695</b>	<b>576,790</b>	<b>555,695</b>	<b>100.000%</b>	<b>100.000%</b>

**Kaufman Four-One Water Distribution Facilities  
2022-23 Billing Schedule**

Month	College Mound		Crandall		Gastonia-Scurry	
	Water	O&M	Water	O&M	Water	O&M
Oct	\$ 27,737.15	\$ 2,185.32	\$ 55,399.17	\$ 4,368.87	\$ 66,164.26	\$ 5,217.43
Nov	27,742.00	2,187.00	55,400.00	4,367.00	66,170.00	5,216.00
Dec	27,742.00	2,187.00	55,400.00	4,367.00	66,170.00	5,216.00
Jan	27,742.00	2,187.00	55,400.00	4,367.00	66,170.00	5,216.00
Feb	27,742.00	2,187.00	55,400.00	4,367.00	66,170.00	5,216.00
Mar	27,742.00	2,187.00	55,400.00	4,367.00	66,170.00	5,216.00
Apr	27,742.00	2,187.00	55,400.00	4,367.00	66,170.00	5,216.00
May	27,742.00	2,187.00	55,400.00	4,367.00	66,170.00	5,216.00
Jun	27,742.00	2,187.00	55,400.00	4,367.00	66,170.00	5,216.00
Jul	27,742.00	2,187.00	55,400.00	4,367.00	66,170.00	5,216.00
Aug	27,742.00	2,187.00	55,400.00	4,367.00	66,170.00	5,216.00
Sep	27,742.00	2,187.00	55,400.00	4,367.00	66,170.00	5,216.00
<b>Total</b>	<b>\$ 332,899.15</b>	<b>\$ 26,242.32</b>	<b>\$ 664,799.17</b>	<b>\$ 52,405.87</b>	<b>\$ 794,034.26</b>	<b>\$ 62,593.43</b>
						<b>\$ 856,627.69</b>

Month	Rose Hill		Total	
	Water	O&M	Water	O&M
Oct	\$ 9,990.22	\$ 791.38	\$ 159,290.80	\$ 12,563.00
Nov	9,988.00	787.00	159,300.00	12,557.00
Dec	9,988.00	787.00	159,300.00	12,557.00
Jan	9,988.00	787.00	159,300.00	12,557.00
Feb	9,988.00	787.00	159,300.00	12,557.00
Mar	9,988.00	787.00	159,300.00	12,557.00
Apr	9,988.00	787.00	159,300.00	12,557.00
May	9,988.00	787.00	159,300.00	12,557.00
Jun	9,988.00	787.00	159,300.00	12,557.00
Jul	9,988.00	787.00	159,300.00	12,557.00
Aug	9,988.00	787.00	159,300.00	12,557.00
Sep	9,988.00	787.00	159,300.00	12,557.00
<b>Total</b>	<b>\$ 119,858.22</b>	<b>\$ 9,448.38</b>	<b>\$ 1,911,590.80</b>	<b>\$ 150,690.00</b>
				<b>\$ 2,062,280.80</b>

# Kaufman Four-One Consumption

FY 21-22

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	College <u>Mound</u>	Crandall	Gastonia <u>Scurry</u>	Rosehill	Sum	Master <u>Meter</u>
Aug-21	11,820	18,944	22,635	-	53,399	51,586
Sep-21	8,513	23,491	24,836	-	56,840	55,183
Oct-21	10,217	22,613	19,582	-	52,412	50,998
Nov-21	7,905	14,888	15,838	-	38,631	37,984
Dec-21	12,333	14,521	16,970	-	43,824	42,056
Jan-22	6,006	10,998	14,375	-	31,379	32,926
Feb-22	6,778	11,515	13,705	-	31,998	32,110
Mar-22	7,200	11,282	15,060	-	33,542	34,013
Apr-22	3,784	13,236	19,065	-	36,085	34,971
May-22	146	12,627	19,506	-	32,279	33,072
Jun-22	417	16,532	28,658	-	45,607	44,941
Jul-22	249	32,248	32,107	-	64,604	64,850
	75,368	202,895	242,337	-	520,600	514,690

# Kaufman Four-One Adjustment of Minimums

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	<b>FY22 Minimums</b>		<b>FY22 Individual Meters</b>		<b>(1) FY22 Master Meter Allocation</b>	
	(a)	(b)	(c)	(d)	(e)	(f = d)
College Mound	100,447	18.0758%	75,368	14.4771%	74,512	14.4771%
Crandall	183,252	32.9771%	202,895	38.9733%	200,592	38.9733%
Gastonia - Scurry	235,831	42.4390%	242,337	46.5496%	239,586	46.5496%
Rose Hill	36,165	6.5081%	-	0.0000%	-	0.0000%
<b>Total</b>	<b>555,695</b>	<b>100.0000%</b>	<b>520,600</b>	<b>100.0000%</b>	<b>514,690</b>	<b>100.0000%</b>

	<b>(2) FY22 Adjusted Minimums</b>		<b>(3) FY23 Minimums</b>	
	(g > a or e)	(h)	(i)	(j = h)
College Mound	100,446.575	17.4148%	96,773.009	17.4148%
Crandall	200,591.678	34.7773%	193,255.572	34.7773%
Gastonia - Scurry	239,586.136	41.5379%	230,823.912	41.5379%
Rose Hill	36,165.150	6.2701%	34,842.506	6.2701%
<b>Total</b>	<b>576,790</b>	<b>100.0000%</b>	<b>555,695</b>	<b>100.0000%</b>

Notes: Minimums and Metered Consumption are stated in 1,000 gallons.

- (1) To Allocate the Master Meter in Proportion to Individual Meters.
- (2) Based on the greater of the FY22 Minimums or the FY22 Master Meter Allocation.
- (3) Allocation of the greater of FY22 Minimum or FY22 Master Meter in Proportion to FY22 Adjusted Minimums.

# Kaufman Four-One Allocation of FY23 Annual Budget

8/10/2022 13:33

Cost of Water:	555,695,000	gallons x	\$3.44	per 1,000 gallons =	\$ 1,911,590.80
Operations & Maintenance:					
Expenditures					\$ 150,695
Tsf from Maintenance Reserve					\$ -
Other Income					\$ (5.00)
Total O&M					<u>\$ 150,690</u>
Total Cost					<u><u>\$ 2,062,280.80</u></u>

## Cost Allocation by Participant:

	FY23 Minimums <small>(1,000 gallons)</small>	Cost of Water	Cost of O&M	Total Cost
College Mound	96,773.009	\$ 332,899.15	\$ 26,242.32	\$ 359,141.47
Crandall	193,255.572	664,799.17	52,405.87	717,205.04
Gastonia - Scurry	230,823.912	794,034.26	62,593.43	856,627.69
Rose Hill	34,842.506	119,858.22	9,448.38	129,306.60
Total	<u>555,695</u>	<u>\$ 1,911,590.80</u>	<u>\$ 150,690.00</u>	<u>\$ 2,062,280.80</u>





# FY23 Approved Budget and Rates Fact Sheet

## North Texas Municipal Water District

Administration Building  
501 East Brown St.  
P.O. Box 2408  
Wylie, TX 75098

972.442.5405  
www.ntmwd.com

### FAST FACTS:

**80 COMMUNITIES**  
SERVED ACROSS

**2,200 SQUARE MILES**  
IN 10 COUNTIES

**WITH A POPULATION OF**  
OF OVER 2 MILLION

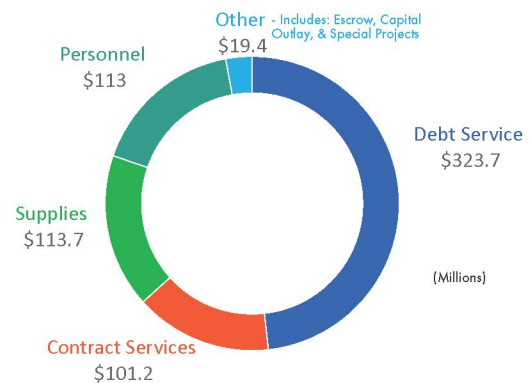


During Fiscal Year 2022, the District continued to navigate a challenging economic environment including supply chain issues and growing inflation when global events worsened the situation. Inflation began to soar to levels not seen in over 40 years with fuel and chemicals seeing some of the largest increases. The District implemented several new tactics to mitigate the unprecedented increases due to inflation, and remains in a sound financial condition. The NTMWD Board of Directors and Staff worked diligently to meet the District's contractual obligation to the participating cities and utilities with reasonable costs in all systems while maintaining our commitment to protect public health and the environment.

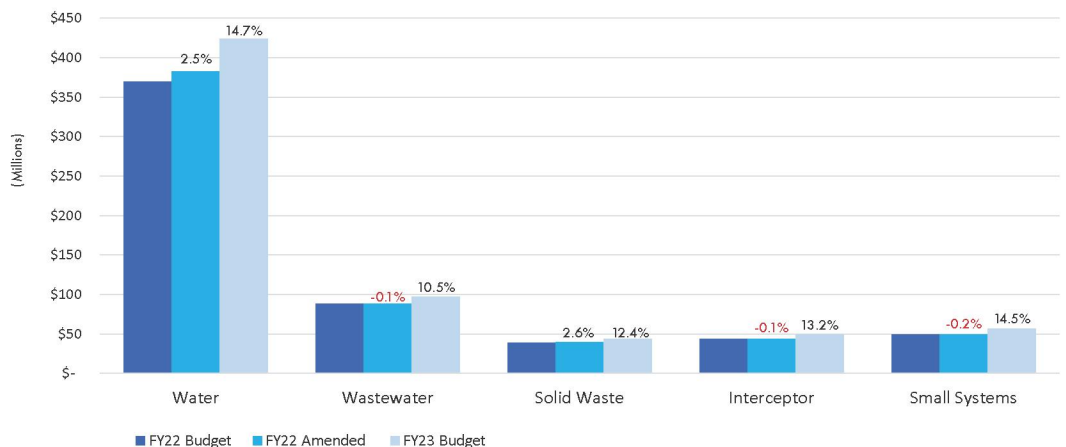
This summary provides an overview of the FY23 Budget and System Expenditures, some key details and projects by service, and some of the ways we are managing costs.

## FY23 Budget

All Systems Expenditures  
**\$671M**



## Expenditures By System



Major adjustments necessary in the FY23 budget include the financial impacts to address the People, Product and Planning costs driving the FY23 Annual All Systems Budget of \$671,396,165, to provide a responsible budget to sustain reliable water, wastewater, and solid waste services.

Key factors and challenges addressed in the budget include:

**People**

To meet our region's water and wastewater needs, new operating facilities are currently under construction such as Bois d'Arc Lake, the Leonard Water Treatment Plant and the Sister Grove Regional Water Resource Recovery Facility (RWRRF). The majority of new personnel requests in FY23 address the continuing growth in our service area including 16 new positions to begin staffing the Sister Grove RWRRF. The current national job market and the need to recruit and retain professional staff to operate the systems have forced the District to address labor shortages, higher turnover rates with compensation adjustments to help employees with inflationary cost of living.

**Product**

During FY22, the District was already navigating a challenging economic environment including supply chain issues and growing inflation when Russia invaded Ukraine and exacerbated the situation. Inflation soared to the highest levels in 40 years with fuel and chemicals seeing some of the largest increases with extreme volatility. Approximately half of the proposed adjustment for the Regional Water System wholesale rate is due to increased chemical costs. To mitigate this unprecedented increase in chemicals, the District conducted out-of-cycle rebids for many of the chemicals needed to meet the mission. Under new contract terms the District shifted from a historically fixed unit price to a contract that adjusts pricing quarterly based on appropriate indices.

**Planning**

Continued growth in the region has increased demands for services, and that combined with unstable construction costs has impacted the capital improvement program budget. Other major increases to the FY23 budget include funding approximately \$980 million of capital projects District-wide such as the McKinney Delivery Point No. 3 to No. 4 Pipeline (\$101M), the South Mesquite RWWTP Peak Flow Management and Expansion (\$151M), and the new Fleet Maintenance Facility (\$12M). With 55,000 new residents moving to our service area every year and the District serving two of the top 10 fastest growing counties in the country, there is an ongoing need to address the regulatory requirements, aging infrastructure and growth needs of the District.

As the nation experiences increased inflation, NTMWD has seen significantly increased construction project costs. In anticipation of continued higher pricing, we have adjusted many of our construction project budgets by approximately 18%. We have also adjusted our debt service budgets to plan for continued rising interest rates.

Despite these challenges of costs associated with People, Product and Planning for the District, NTMWD remains in a sound financial condition. The Board's goal of meeting the needs of our participating cities within state and federal laws while protecting the environment continues to be accomplished with reasonable cost in all systems.

FY23 MEMBER CITY PROPOSED WHOLESALE WATER RATE			
	FY22 Budget	FY23 Proposed	Change
<b>Variable O&amp;M</b> <small>(i.e., chemicals, power, etc.)</small>	\$ 0.60	\$ 0.81	\$ 0.21
<b>Fixed O&amp;M</b> <small>(i.e., personnel, maintenance, etc.)</small>	\$ 0.73	\$ 0.85	\$ 0.12
<b>Capital</b>	\$ 1.66	\$ 1.73	\$ 0.07
<b>Total (per 1,000 gal.)</b>	<b>\$ 2.99*</b>	<b>\$ 3.39*</b>	<b>\$ 0.40</b>






\*Customer Cities/Entities rate + \$.05

## WATER SYSTEM





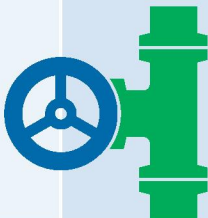
<p><b>Who Benefits</b></p> <p style="text-align: center;">Allen Farmersville Forney Frisco Garland McKinney Mesquite Plano Princeton Richardson Rockwall Royse City Wylie</p> <p style="font-size: small; text-align: center;">plus 34 Customer Cities/Entities</p>	<p><b>Major Projects Needed</b></p> <ul style="list-style-type: none"> <li>• McKinney Delivery Point No. 3 to No. 4 Pipeline (\$101M)</li> <li>• Wylie Water Treatment Plant (WTP) Conversion to Biologically Active Filtration (\$82M)</li> <li>• Northeast McKinney Pump Station (\$60M)</li> <li>• Future Water Supply Project (\$58M)</li> <li>• Systemwide Meter Vault Improvements Phases IV and V (\$47M)</li> <li>• North Garland System Ground Storage Tank (\$44M)</li> <li>• Waterline Relocations for TXDOT Road Improvements (\$34M)</li> <li>• 36" Plano Westside Pipeline (to Plano No. 3 and Richardson No. 2) (\$21M)</li> <li>• Wylie to Rockwall Pipeline Relocation, Phase II (\$19M)</li> </ul>	<p><b>Staff Required*</b></p> <p style="text-align: center;">146 ↑ 10</p>	<p><b>FY23 Budget</b></p>
<p><b>\$ 215.9M Capital/Debt</b></p> <p><b>\$ 207.9M O&amp;M</b></p> <p><b>\$ 423.8M Total</b></p> <p><b>Wholesale water rate:</b></p> <p><b>13.38 % increase</b></p> <p><b>\$3.39 per 1,000 gallons</b></p>			

\*does not include support staff






# REGIONAL WASTEWATER SYSTEM\*\* (treatment)

 Who Benefits	 Major Projects Needed	 Staff Required*	 FY23 Budget
Allen Forney Frisco Heath McKinney Melissa Mesquite Plano Princeton Prosper Richardson Rockwall Seagoville  <small>plus 4 Customer Cities/Entities</small>	<ul style="list-style-type: none"> <li>• South Mesquite RWWTP Peak Flow Management &amp; Expansion (\$151M)</li> <li>• Rowlett Creek RWWTP Peak Flow Management Phase II (\$46M)</li> <li>• Rowlett Creek RWWTP Operations Building Construction (\$8M)</li> <li>• Floyd Branch RWWTP Peak Flow and UV Improvements (\$5M)</li> <li>• Lower East Fork RWRRF Land (\$15M)</li> </ul> 	160  ↑ 15	\$ 41.6M Capital/Debt \$ 55.7M O&M \$ 97.4M Total  Estimated wholesale Member wastewater cost per 1,000 gallons: ↑ 8.44%

# UPPER EAST FORK INTERCEPTOR SYSTEM\*\* (wastewater collection system)

 Who Benefits	 Major Projects Needed	 Staff Required*	 FY23 Budget
Allen Frisco McKinney Melissa Plano Princeton Prosper Richardson  <small>plus 4 Customer Cities/Entities</small>	<ul style="list-style-type: none"> <li>• McKinney East Side Gravity Extension Improvements (\$23M)</li> <li>• US Highway 380 Lift Station and Force Main Design (\$8M)</li> </ul> 	23  no change	\$ 30.3M Capital/Debt \$ 19.2M O&M \$ 49.5M Total  Estimated wholesale Member wastewater cost per 1,000 gallons: ↑ 12.1%

# SOLID WASTE SYSTEM

 Who Benefits	 Major Projects Needed	 Staff Required*	 FY23 Budget
Allen Frisco McKinney Plano Richardson  <small>and other third party customers in proximity to our facilities</small>	<ul style="list-style-type: none"> <li>• Fleet Maintenance Facility (\$12M)</li> <li>• Parkway Transfer Station Conversion to Top Load (\$8M)</li> <li>• 121 Regional Disposal Facility Sectors 6B and 6C Mass Excavation (\$5M)</li> <li>• 121 RDF Heavy Equipment Shop Addition (\$5M)</li> <li>• North Transfer Station Property and Design (\$4M)</li> <li>• 121 RDF South Slope Closure (\$4.1M)</li> <li>• 121 RDF Cell 6A Construction (\$1.1 M)</li> </ul> 	116  ↑ 3	\$ 8.0M Capital/Debt \$ 35.4M O&M \$ 43.4M Total  Wholesale Member solid waste service cost per ton: \$38.25 (no change)

\*\*Does not include small system costs, projects and staffing as those vary by participants of each local system.

\*does not include support staff



## MORE WAYS WE ARE MANAGING COSTS

### *Financial Management*

NTMWD continues to build on its commitment to strong stewardship and transparency providing greater online access to more detailed financial data. NTMWD received recognition under the Transparency Stars program through the Texas Comptroller of Public Accounts which recognizes local governments for going above and beyond in transparency efforts. The District was awarded **the Transparency Star for Traditional Finances in 2021 and the Transparency Star for Debt Obligations in 2022**. NTMWD was also recognized by the **Government Finance Officers Association (GFOA) with its third Distinguished Budget Presentation Award**, the highest honor a public sector organization can receive for its budget document.

Growth within our region, supply chain shortages and unstable construction costs have impacted the capital improvement program budget. The District's implementation of a new financing tool, **Extendable Commercial Paper Programs (ECP) in the Regional Water System, Regional Wastewater System and Upper East Fork Interceptor System provided critical liquidity in financing capital projects as funding requirements changed in 2022**. ECP is a short-term financial instrument used to appropriate capital improvement projects. The ECP programs allow the District to appropriate capital projects without issuing long-term debt upfront and issue ECP notes as required for cash flow purposes.

The District refinanced Regional Water System bonds in FY22 which resulted in total savings of \$39.259M between 2022-2032.

The Regional Solid Waste System bond rating was upgraded by Standard & Poor's from a AA rating to a AA+ rating. The following systems also had credit rating increases by S&P from A- to A: Sabine Creek WWTP, Sabine Creek Interceptor, Parker Creek Interceptor, and Parker Creek Parallel Interceptor.

The Purchasing Department continues to implement its Competitive Bid and Proposal process. Cost avoidance is calculated by taking the total amount of all bids received and dividing by the number of bids received, then subtracting that from the awarded amount. This shows the value of going through a competitive process - FY22 Cost Avoidance \$4.45M as of August 2022.

### *Operations*

#### **Solid Waste**

**Alternate Liner System** – Both state and federal regulations require a composite liner system for landfills consisting of 2 feet of clay, a 60 mil thick HDPE geomembrane, a double-sided drainage geocomposite, and 2 feet of protective cover. NTMWD received approval from the TCEQ to replace the 2 feet of clay

with a geosynthetic clay liner (GCL). By eliminating 2 feet of clay, construction time is reduced by almost half. Also, 2 feet of additional excavation is not needed along with processing the clay. This is an additional cost savings to the construction process.

#### **Wastewater**

##### **Solids De-watering Optimization at Wilson Creek RWWTP and Current Construction Initiatives at the Rowlett Creek RWWTP**

Recently installed centrifuge de-watering equipment at Wilson Creek resulted in a 30% reduction in bio-solids hauling and removal. The centrifuges replaced Belt Filter Presses that were at the end of their service life but were also older and less efficient technology. Centrifuge equipment is being reviewed and added to other facilities based on production requirement and was most recently included as part of the Rowlett Creek RWWTP solids handling improvements.

#### **Water**

##### **Chemical Optimization at Wylie Treatment Complex**

Chemical optimization efforts resulted in a reduction of chemicals used in the coagulation process at the Wylie Treatment complex. These efforts resulted in chemical feed reduction for polymer and lime, resulting in a cost avoidance of approximately \$700,000. In addition to the budgetary savings, the need for extra maintenance associated with our lime system was reduced.

##### **Water Conveyance System Water Quality Improvements**

Implementation of operational changes to delivery point level management during lower summer demand periods has resulted in a significant reduction of field staff labor hours and total gallons of water discharged during water quality flushing efforts. Recently installed water quality testing stations in strategic locations throughout the water conveyance system have proven effective in collection of critical water quality data and supporting preemptive response to water quality maintenance activities in the water conveyance system. Blow Off Valve (BOV) improvements in multiple locations in the water conveyance system provides field staff easier access and facilitates more efficient and safe flushing practices.

#### **Energy**

##### **Energy Strategies**

Due to established energy strategies used within NTMWD energy program, the District is able to minimize the impacts of increasing energy costs. NTMWD works closely with our power utilities and retail electric providers to accurately forecast our anticipated energy needs and lock in enough fixed price blocks of power to keep our energy costs predictable and to achieve the best practical rates. In addition, the NTMWD water operation's team, with our 4 Coincident Peaks (4CP) efforts, reduces pumping in the hot peak hours of the summer months in order to help the Texas power grid and minimize NTMWD exposure to high power prices.