

• The District provides service within its designated service area through the use of extensive water and sewer infrastructure including:

Water Treatment Plant

5 Water Pump Stations 2 Sewage Lift Stations

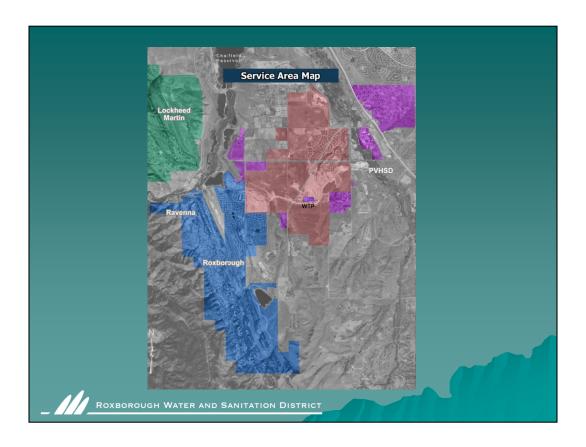
6 Water Storage Tanks 64 Miles of Sewer Pipes

86 miles of Water Pipes 1451 Manholes

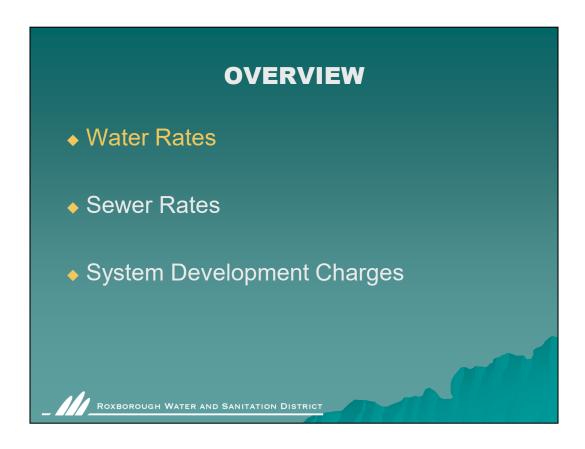
564 Fire Hydrants

2074 Water Valves

- Funding for operation, maintenance, repair and replacement of the District's system is primarily provided by rates, fees and charges. Property taxes provide a minor component of the District's revenues.
- The District reviews rates on an annual basis. Rates are established based on funding requirements for operation, maintenance and replacement of the system.



- RWSD provides different services in different areas
- Central Service Area
  - RWSD provides both water and sewer service.
  - Central Service Area includes the Roxborough and Ravenna developments.
- East Service Area
  - RWSD provides water service only.
  - East Service Area includes the Chatfield East, Chatfield Acres, Titan Road Industrial Park (TRIP), Plum Valley Heights developments and several smaller parcels.
  - Chatfield East, Chatfield Acres, and TRIP are served with water supplied by RWSD and treated by Centennial Water and Sanitation District.
  - Plum Valley Heights is served through the RWSD treatment and distribution system.
- West Service Area
  - RWSD provides sewer service only.
  - West Service area includes the Lockheed-Martin parcel in Jefferson County.
  - RWSD conveys LM sewer flows to Littleton for treatment.
- Sterling Ranch service provided by Dominion Water and Sanitation District
  - RWSD provides water treatment and temporary wastewater conveyance service only.
  - Water supply for Sterling Ranch is provided by Dominion Water and Sanitation District.
  - RWSD also operates the DWSD distribution system on a contract basis.



- Each year, the District reviews background information regarding water treatment and use; revenues and expenses; and rate history; to establish an appropriate perspective for evaluation of rates.
- Rates are then calculated to support the current year budget and provide adequate reserves for operations, maintenance, repairs and capital replacement.

	Total Treated Water (1Kgal)	Average No. EQRs	Average Water Use Per Unit (GPD/EQR)	Total Revenue From User Charges (\$)	Ave. Revenue/ EQR From User Charges (\$)	Total Revenue From User Charges & Surcharges (\$)	Ave. Revenue/ EQR From User Charges & Surcharges (\$)
2018	341,998	3714	252.28	\$3,357,704	\$904	\$4,566,021	\$1229
2019	313,998	3791	226.84	\$3,386,585	\$893	\$4,606,232	\$1215
2020	370,025	3844	263.73	\$3,873,409	\$1008	\$5,102,115	\$1327
2021	342,715	3876	242.25	\$3,707,043	\$956	\$4,952,390	\$1278
2022	361,487	3924	252.39	\$3,794,971	\$967	\$5,058,367	\$1289

- Water production in 2022 increased from production in 2021 primarily due to increased irrigation in response to a 4% decrease in precipitation in 2022.
- The average annual cost per customer(EQR) was \$967 without surcharges and \$1,289 with surcharges. Surcharges included \$25/mo./EQR for purchase of a renewable water supply and \$3/mo./EQR for system replacements.

<sup>\*</sup>EQR (Equivalent Residential Unit) – A customer using the same size tap as a normal residential unit. Customers using larger taps are counted as more EQRs in proportion to tap size.

### **AFFORDABILITY**

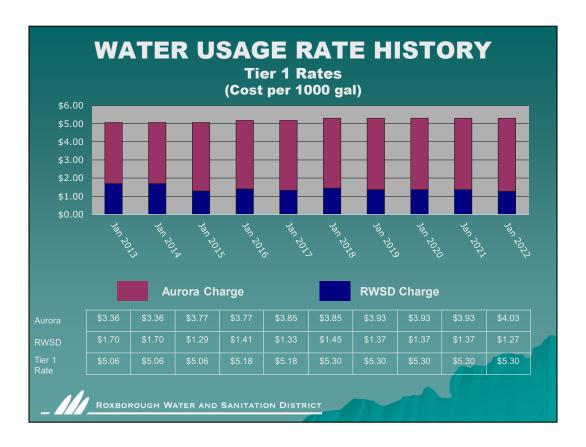
- EPA Criteria Less than 2.5% MHI
- CDPHE Criteria Less than 1.5% MHI
- Roxborough CDP 2017-2021 MHI -\$137,569
- Average Annual Cost/Cust. \$1,289
- Average Annual Cost/Cust 0.94%



- Affordability of water rates is evaluated by comparing Roxborough Water and Sanitation District rates to affordability guidelines used by EPA and CDPHE.
- EPA has not issued strict guidance regarding affordability but generally indicates that water rates exceeding 2.0% to 2.5% of the median household income may be a concern.
- CDPHE indicates that water rates exceeding 1.5% of median household income may be a concern.
- The actual affordability index for RWSD based on the 2017-2021 median household income for Douglas County-Roxborough CDP of \$137,569, and the average annual cost per RWSD customer of \$1,289 is 0.94% of MHI.

Rate (Per 1000 Gal)	Mar 2018- Mar 2019	Mar 2019- Mar 2020	Mar 2020- Mar 2021	Mar 2021- Mar 2022	Mar 2022- Present
0-5 gal	\$5.30	\$5.30	\$5.30	\$5.30	\$5.30
6-10 gal	\$5.30	\$5.30	\$5.30	\$5.30	\$5.75
11-20 gal	\$5.30	\$6.30	\$6.30	\$6.50	\$7.00
21-40 gal	\$6.85	\$7.50	\$7.50	\$7.75	\$8.50
41+ gal	\$12.41	\$12.50	\$12.50	\$12.75	\$13.75
Monthly Base Charge	\$35.14/ mo	\$35.14/ mo	\$36.20/ mo	\$36.50/ mo	\$37.00/ mo

- The Tier 1 rate per 1000 gallons of water has not increased since 2018, primarily due to the District's desire to keep essential indoor water at an affordable rate.
- The monthly flat fee has increased by approximately 1% per year since 2018, as compared to a 4% annual increase in the Consumer Price Index over the same period.

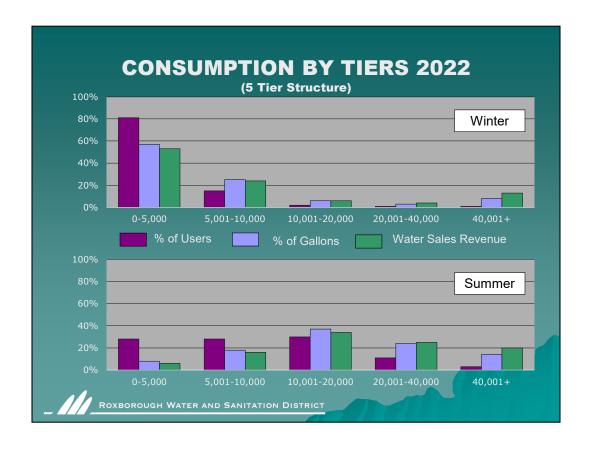


#### Since 2013:

- The cost of raw water purchased from Aurora has increased from \$3.36/1000 gal to \$4.03/1000 gal, a 20% increase, or an average of 2.0% per year.
- Over the same period, the District's charge for treatment and distribution has decreased from \$1.70 to \$1.27, a 25% decrease or an average of 2.5% per year.

	2021	2022	% Difference
Water	\$1,418,644	\$1,485,726	4.7%
Utilities	\$192,423	\$268,131	39.3%
Operating Supplies	\$66,718	\$109,603	64.3%
Operator O/T	\$22,442	\$30,318	35.1%
CWSD Treatment & Distribution	\$25,346	\$21,941	-13.4%
Total	\$1,725,573	\$1,915,719	11.0%
Production (1000 gals)	345,588	368,444	6.6%
Variable Cost (Per 1000	\$4.99	\$5.20	4.2%

- The Variable Cost of Water includes items that vary based on the quantity of water treated. Fixed costs such as operating staff, equipment, and insurance are not included in the Variable Cost of Water.
- From 2021 to 2022 variable costs increased \$0.21 per 1000 gallons primarily due to increased costs for operating supplies and utilities.



- In winter, the lowest tier represents 81% of the users, 57% of the water used, and 53% of the water sales revenue.
- In summer, the first three tiers represent 86% of the users, 63% of the water used, and 56% of the water sales revenue.
- In both winter and summer, users in the upper tiers use more water per user and pay higher rates for the water used.

	Total Operating Revenues	Total Operating Expenditures	Balance*
2017	\$3,310,128	\$3,038,910	\$271,218
2018	\$3,567,360	\$3,208,882	\$358,479
2019	\$3,728,772	\$3,347,700	\$381,072
2020	\$4,443,981	\$4,151,417	\$292,564
2021	\$4,228,475	\$3,711,266	\$517,209
2022	\$4,338,531	\$4,124,282	\$214,249
2023 Budget)	\$3,601,200	\$4,276,176	(\$674,976)

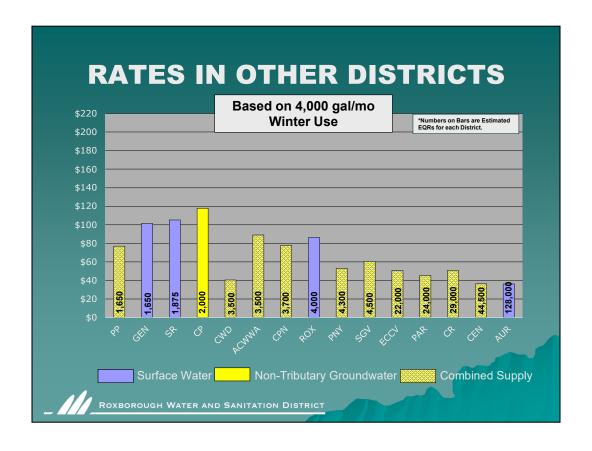
- For 2017 -2022, the amounts shown reflect actual revenues and expenses.
- For 2023, revenues and expenses are based on the 2023 budget.
- The balance for each year is used to fund reserves, as established by the District's financial policies.
- The District's budgeting practice is based on conservative estimates of revenues and aggressive budgeting of expenses, which results in a projected deficit for the budget year. As shown by the results in previous years, a positive balance is normally achieved based on actual revenues and expenses.

### **RATES IN OTHER DISTRICTS** RWSD rates compared to rates in 14 local districts **Arapahoe Water and Wastewater Authority (ACWWA) Centennial (CEN)** Parker (PAR) **Stonegate Village (SGV) Castle Pines (CP)** Cottonwood (CWD) Castle Rock (CR) **Castle Pines N. (CPN)** Pinery (PNY) E. Cherry Crk. (ECCV) Perry Park (PP) Aurora (AUR) Genesee (GEN)

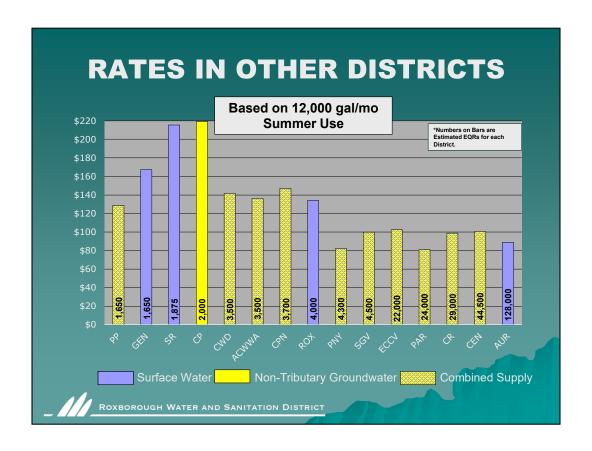
 For informational purposes, rates are normally compared to rates in nearby cities, towns and districts.

Sterling Ranch (SR)

• A comparison of monthly charges based on average winter and summer water use is provided on the following slides.



- Comparison of rates to other providers is presented for informational purposes only. Each entity must set its own rates based on its own unique financial requirements.
- Generally, smaller providers tend to have higher rates than larger providers. In addition, those providers that use surface water, or have a combined supply with a significant portion of surface water, have higher rates than providers that use primarily groundwater.
- Eventually, all providers will have to convert to surface water and will have correspondingly higher rates.



- Comparison of rates to other providers is presented for informational purposes only. Each entity must set its own rates based on its own unique financial requirements.
- Generally, smaller providers tend to have higher rates than larger providers. In addition, those providers that use surface water, or have a combined supply with a significant portion of surface water, have higher rates than providers that use primarily groundwater.
- Eventually, all providers will have to convert to surface water and will have correspondingly higher rates.

REBATES IN OTHER DISTRICTS	AURORA WATER	DENVER WATER	ROXBOROUGH*
High Efficiency Toilet (<1.1 gpf)	up to \$100	Up to \$100	\$50
High Efficiency Washer		-	Up to \$75
Xeriscape (500 SF minimum) Res.	\$4000 Max over 2 years	-	
Rotary High Efficiency Sprinkler Heads	\$6 per head / limit 50 heads per residence	Up to \$3 per head / 1 rebate per 10-years	
Weather-based Controller with Rain Sensor	\$200	up to \$75	

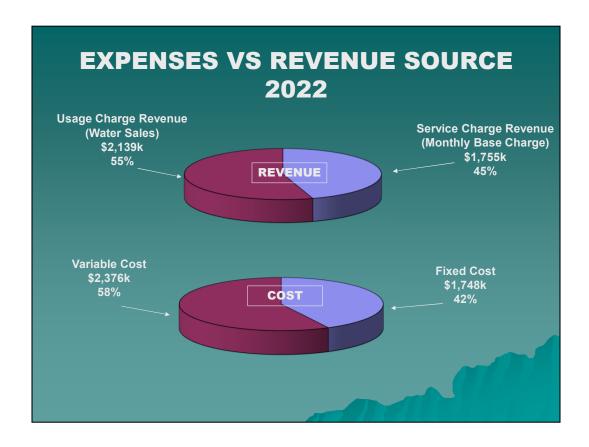
- The District provides rebates for certain high efficiency fixtures and appliances.
- In general, additional revenues received from upper tier customers are used to fund the rebate program.

### REVIEW OF RATE PHILOSOPHY (IMPLEMENTED 2003) BASIC CONCEPT

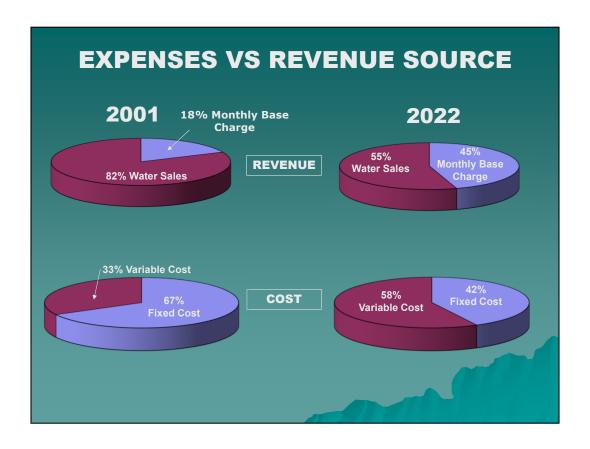
- Monthly Base Charge
  - Monthly Base Charges cover fixed costs
  - Spread income over year
  - Revenues not sensitive to water use
- Tiered Water Use Charges
  - Charges reflect actual water use
  - Adds fairness
  - Lowest tier covers in house use



- The District charges a monthly base charge to cover expenses related to fixed cost items such as personnel, insurance, administrative expenses, vehicles, etc.
- The District also charges for actual water use on a per 1000 gallon basis.



- To achieve financial stability, the District's rate structure is based on covering fixed costs with the monthly base charge revenue, and variable costs with water sales revenue. Under this system customers:
  - Share equally in costs related to keeping the system ready to serve (Monthly Base Charge).
  - Pay for water in proportion to use (\$ per 1000 gallons).
- Using this method, the District maintains adequate revenue independent of water sales.
- In 2022, fixed costs were 42% of total costs, while monthly base charge revenue represented 45% of total revenues. Results for variable costs and water sales revenue were similar.



• In 2001, prior to adoption of the current rate strategy, the majority of the District's revenues came from water sales, while the majority of the costs were fixed. This left the District vulnerable to revenue shortfalls in low water use years.

# RECOMMENDED 2023 WATER RATE ACTION

- ◆ Increase Upper Tier Charges
- ◆ Increase to Monthly Base Charge
- ♦ Aurora Water Availability Surcharges

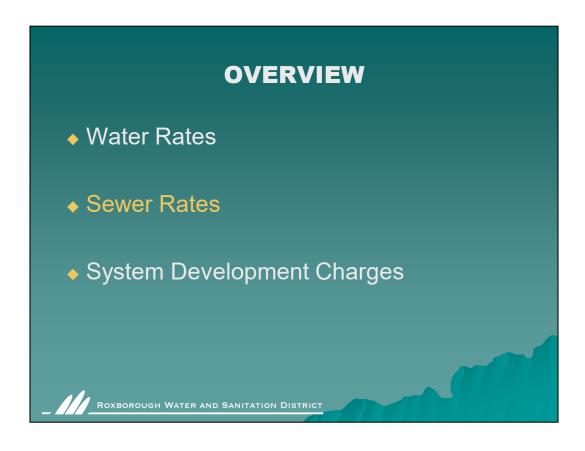


		Current	Recommended 2023 Rates
Water Use	•		
Per 1000 Gal	0-5 gal	\$5.30	\$5.30
	5-10 gal	\$5.75	\$6.25
	10-20 gal	\$7.00	\$7.75
	20-40 gal	\$8.50	\$10.00
	40 + gal	\$13.75	\$17.00
Projected Reserves from W	ater Sales	\$602,559	\$943,369
Base Char	ge		
Monthly Base Charge		\$37.00	\$39.00
Projected Reserves from Fl	at Fee	(\$71,105)	\$23,071
Surcharge	s		
Water System Replacemer	t Fund	\$3.00	\$3.00
Projected Revenue from W Replacement Fund	ater System	\$141,264	\$141,264
Water Supply Fund		\$25.00	\$25.00
Projected Revenue from Wor Debt Service	ater Supply Fund	\$1,177,200	\$1,177,200

- Summary of the adequacy of existing rates:
  - The rate in the lowest tier of \$5.30/1000 gal is less than the estimated cost of production for 2023 of \$5.75/1000 gal.
  - The existing flat fee provides slightly less revenue than needed to cover fixed costs as projected in the 2023 budget.
  - The \$3/mo. surcharge for capital replacement reserves provides a modest contribution to reserves.
  - The \$25/mo. surcharge for water supply produces adequate revenue for debt service on the loan for the permanent water supply.
- Recommended Action:
  - Keep Tier 1 Rates at \$5.30/kgal to keep essential water below cost.
  - Increase the Monthly Base Charge by \$2.00 to cover fixed costs and provide a modest contribution to reserves.
  - Change tier charges to promote conservation and emphasize the difference between essential and non-essential water use.
- The Board approved the recommended action at its March 15, 2023, meeting, with an effective date of March 25, 2023.

SURCHARGES (Effective April 1, 2023)  Aurora Water Drought/Availability Conditions							
Aurora Water Drought  Allowed Water Usage for Tiers	/Availability  Normal	Stage I	ons Stage II	Stag III			
Surcharge per 1,000 gallons used up to 110% of winter quarter average	\$0.00	\$0.00	\$0.00	\$4.20			
Surcharge per 1,000 gallons used above 110% of winter quarter average	\$0.00	\$1.95	\$7.60	\$12.60			
Recommended Aurora Water	์ Drought Sเ	ırcharge	for RWS	D			
Allowed Water Usage for Tiers	Normal	Stage I	Stage II	Stag III			
Tier 1 0-5,000	\$0.00	\$0.00	\$0.00	\$4.20			
Tier 2 5-10,000	\$0.00	\$1.95	\$7.60	\$12.6			
Tier 3 10-20,000	\$0.00	\$1.95	\$7.60	\$12.6			
Tier 4 20-40,000	\$0.00	\$1.95	\$7.60	\$12.6			
Tier 5 40.000+	\$0.00	\$1.95	\$7.60	\$12.6			

- In the event of water shortages, the City of Aurora can impose water use restrictions and surcharges on its own customers.
- Based on its water supply agreement with Aurora, RWSD is required impose similar restrictions and surcharges on RWSD customers.
- Implementation of the surcharges by Aurora requires a vote of the Aurora City Council.
- The Aurora City Council has stated that beginning May 1, 2023 a Stage I Drought will be declared, at which time the Stage I surcharge and water restrictions will be in effect.
- Under Stage 1 Drought Surcharges, RWSD customers will pay an additional \$1.95/1000 gallons for water use above 5000 gallons per month.



- Unlike water, sewer flows for each customer are not metered. As a result, sewer service is billed as a monthly base charge.
- The monthly base charge charged for sewer service provides revenues for operation as well as reserves for operations and system replacement.

	Total Wastewater (1000's of Gal)	Average No. of Connected EQRs	Average Sewage Produced Per Unit (GPD/EQR)	Total Revenue From User Charges (\$) *	Ave. Revenue/ EQR From User Charges (\$) *	Total Revenue From User Charges & Surcharges (\$) *	Ave. Revenue/ EQR From User Charges & Surcharges (\$) *
2018	194,584	3573	149.20	\$1,610,056	\$451	\$1,737,421	\$486
2019	196,677	3606	149.43	\$1,648,695	\$457	\$1,777,107	\$493
2020	194,288	3618	147.12	\$1,703,263	\$471	\$1,832,504	\$506
2021	196,992	3658	147.54	\$1,766,411	\$483	\$1,897,131	\$519
2022	178,638	3711	131.88	\$1,875,252	\$505	\$2,007,885	\$541

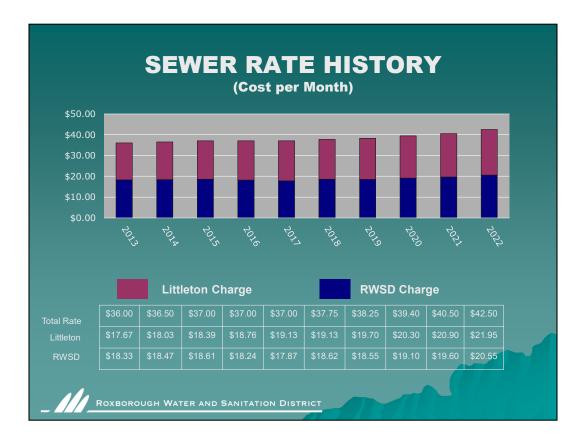
- The quantity of wastewater collected in the District during 2022 decreased from the prior year.
- Wastewater flows in 2022 were lower primarily due to sewer line rehabilitation and decreased precipitation both of which decrease inflow and infiltration related to high groundwater tables.
- The average annual cost per customer (EQR) was \$505 without surcharges and \$541 including surcharges. The only surcharge related to sewer service is \$3/mo./EQR for system replacement.

### **AFFORDABILITY**

- ◆ EPA Criteria Less than 2.5% MHI
- CDPHE Criteria Less than 1.5% MHI
- Roxborough CDP 2017-2021 MHI -\$137,569
- Average Annual Cost/Cust. \$541
- Average Annual Cost/Cust 0.39%



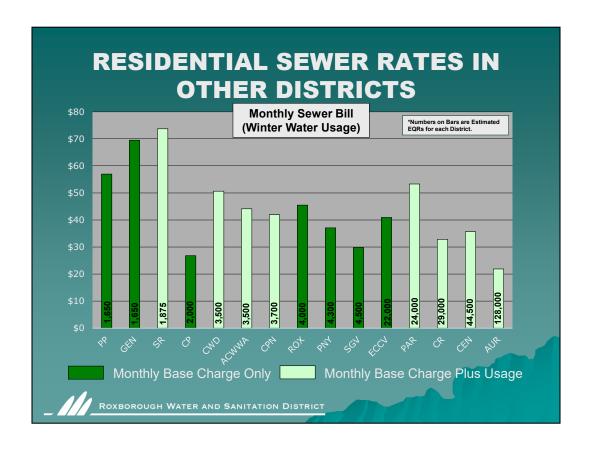
- Affordability of sewer rates is evaluated by comparing Roxborough Water and Sanitation District rates to affordability guidelines used by EPA and CDPHE.
- EPA has not issued strict guidance regarding affordability but generally indicates that sewer rates exceeding 2.0% to 2.5% of the median household income may be a concern.
- CDPHE indicates that sewer rates exceeding 1.5% of median household income may be a concern.
- The actual affordability index for RWSD based on the 2017-2021 median household income for Douglas County-Roxborough CDP of \$137,569, and the average annual cost per RWSD customer of \$541, is 0.39% of MHI.



- Since 2013:
  - Overall sewer rates have increased by an average of 1.8% per year.
  - The treatment cost charged by Littleton has increased by 2.4% per year.
  - The cost charged by the District for collection and transmission has increased by 1.1% per year.

#### **SEWER REVENUES VS. EXPENSES Total Operating Total Operating** Balance\* Revenues Expenditures 2017 \$1,927,093 \$1,684,433 \$242,661 2018 \$1,959,851 \$1,672,379 \$287,472 \$1,940,768 \$1,866,796 \$73,972 2019 2020 \$2,027,282 \$1,789,489 \$237,794 \$1,981,928 2021 \$2,141,242 \$159,314 \$2,245,091 \$2,224,310 \$20,781 2022 2023 \$2,153,000 \$2,238,500 (\$85,500)(Budget) \* Available for Capital Projects/Reserves ROXBOROUGH WATER AND SANITATION DISTRICT

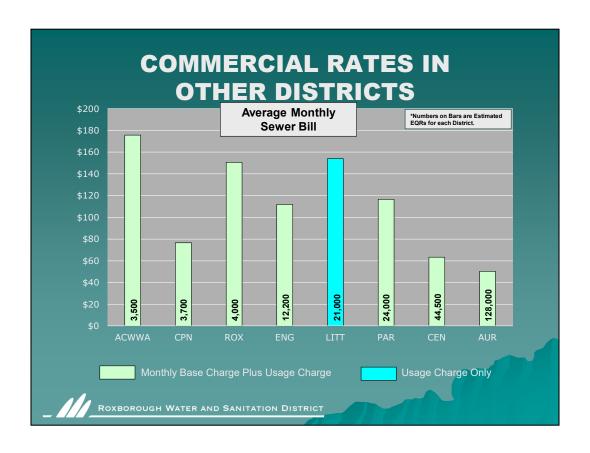
- For 2017 2022, amounts shown reflect actual revenues and expenses.
- For 2023, revenues and expenses are based on the 2023 budget.
- The balance for each year is used to fund reserves, as established by the District's financial policies.
- The District's budgeting practice is based on conservative estimates of revenues and aggressive budgeting of expenses, which results in a relatively low estimated balance. As shown by the results in previous years, a higher balance is normally achieved based on actual revenues and expenses.



 Comparison of monthly charges to other service providers is presented for informational purposes only. Each entity must set its own rates based on its own unique financial requirements.

	Cost per Month
Monthly Base Charge	\$ 42.50
Non-Metered Wastewater Fee (Cost/1,000 gal clean water used	\$ 2.16
Metered Wastewater Fee (Cost/1,000 gal wastewater produced)	\$ 3.97
Repair and Replacement Fee	\$ 3.00

- Commercial customers pay the same base charge per EQR as residential customers.
- Commercial customers pay an additional fee to account for the types of discharge they produce. The fee varies depending on whether wastewater is metered or unmetered.
- Commercial customers pay the same Repair and Replacement fee per EQR as residential customers.



 Comparison of monthly charges to other service providers is presented for informational purposes only. Each entity must set its own rates based on its own unique financial requirements.

# RECOMMENDED 2023 SEWER RATE ACTION

- ◆ Increase Monthly Base Charge to cover Littleton Increases
- ◆ Increase to Commercial Wastewater
   Fee (per 1,000 gals) to cover Littleton
   Increases

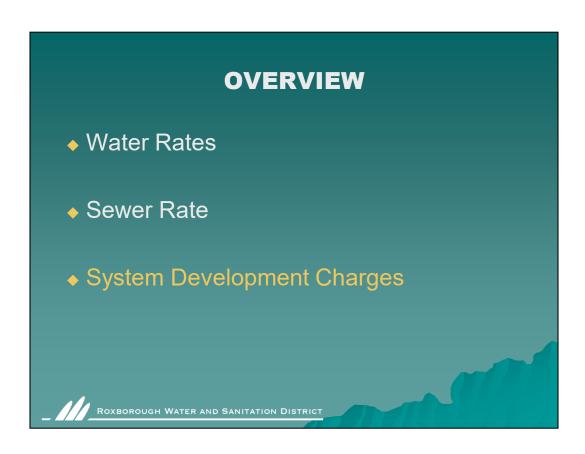


	Current	Recommende 2023 Rates
Monthly Base Charge	\$42.50	\$44.50
Sewer System Replacement Fund	\$3.00	\$3.00
Projected Reserves from Monthly Base Charge	\$7,125	\$96,189
Projected Reserves om Surcharges	\$133,596	\$133,596

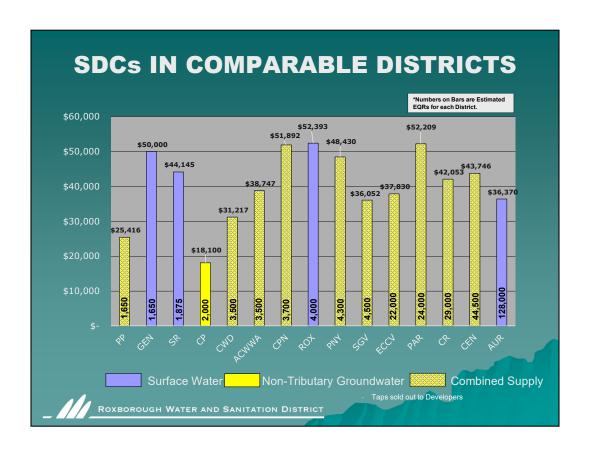
- Summary of the adequacy of existing rates:
  - The existing monthly base charge and surcharge provide adequate revenue to cover system operation expenses and make modest contributions to reserves.
- Recommended Action:
  - Increase sewer rates by 4.8% to cover the Littleton increase and improve the projected contribution to reserves.
- The Board approved the recommended action at its March 15, 2023, meeting, with an effective date of March 25, 2023

	Current	Recommended 2023 Rates
Monthly Base Charge	\$42.50	\$44.50
Sewer System Replacement Fund	\$3.00	\$3.00
Non-Metered Wastewater Fee (Cost/1,000 gal clean water used)	\$2.16	\$2.26
Metered Wastewater Fee (Cost/1,000 gal wastewater produced)	\$3.97	\$4.16

- Summary of the adequacy of existing rates:
  - The existing monthly base charge and surcharge provide adequate revenue to cover system operation expenses and make modest contributions to reserves.
- Recommended Action:
  - Increase sewer rates by 4.8% to cover the Littleton increase and improve the projected contribution to reserves.
  - Increase the commercial wastewater fee to address cost increases.
- The Board approved the recommended action at its March 15, 2023, meeting, with an effective date of March 25, 2023



- System Development Charges (SDCs) are required for new homes connecting to the District's water and sewer systems.
- SDCs do not apply to existing customers connected to the District's water and sewer systems.



 Comparison of SDCs to other service providers is presented for informational purposes only. Each entity must set its own charges based on its unique financial requirements.

	SDC Sum	nmary	
		2022	2023
Water			
	New Facilities	\$3,877	\$3,561
	Existing Facilities Buy-In	\$26,419	\$27,701
	Water Supply	\$5,556	\$5,847
	Subtotal	\$35,852	\$37,109
Sewer			
	New Facilities	\$494	\$423
	Existing Facilities Buy-In	\$10,391	\$10,851
	Outside Treatment Fees	\$5,656	\$5,656
	Subtotal	\$16,541	\$16,930
Total \	Water and Sewer SDC	\$52,393	\$54,039

- System Development Charges are calculated to ensure that new homes pay their fair share of water and sewer infrastructure costs. The SDC is comprised of several components including:
  - New homes' share of the cost of new facilities required to serve District customers.
  - Buy-In to existing systems that have been or are being paid for by existing customers.
  - Buy-In to the cost of the District's permanent, renewable water supply.
  - Connection fee paid to Littleton for wastewater treatment service.
- For 2023, the SDC for a new home connecting to the District's water and sewer systems is \$54,039, an increase of \$1,646 from 2022.
- Recommended Action:
  - Increase the SDC by \$1,646.
- The Board approved the recommended action at its March 15, 2023, meeting, with an effective date of March 25, 2023.