City of Rochester Hills Utility Rate Model

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Utility Rate Model

- "Cash-needs Basis" – The model sets rates based on anticipated cash needs. Depreciation and accrual accounting is excluded from the model. This method requires the City to maintain lower cash reserves (and lower utility rates) than it would if rates were set to fund depreciation expense. This model also allows for the City to cover the costs of Capital Expenditures on a cash basis.

- "Target Working Capital" – Cash and current assets, net of current liabilities. Categories discussed on later slide.

- Why 5 Years? - The model looks at rate increases over a 5-year horizon. Doing this, the City is able to "smooth out" the rate increases to avoid rate "spiking". This should provide a level of consistency for the City's customers and prevent any unnecessary surprises related to future rate increases.
  - Cruise ship vs. speed boat

Utility Rate Model Summary

➢ 5 Year Model is not a 5 Year Commitment

The model is a “living” tool that should be reviewed and updated every year as part of the budget process, continuously pushing the forecast out another year, always looking 5 years into the future. Because facts and circumstances can change so quickly, the City Council should only adopt utility rate increases one year at a time, not for the next 5 years at one time.

Utility Rate Model Summary (continued)

Readiness To Serve (RTS) Charge

- As part of its rate structure, the City charges a monthly fixed charge to its customers in addition to the variable (commodity) rate based. This is referred to as a Readiness To Serve Charge (RTS). The City commonly calls this the Customer Charge. The RTS charge represents an incremental and distinct capacity obligation or cost to the system. The RTS helps pay for operational costs such as City staff, insurance, accounting, audit, technology, etc.... These costs exist before a customer uses any water.

- The City's RTS charges for both water and sewer currently generate approximately $450k each per year. This is approximately 7% of Water's and 11% of Sewer's operational expenses.

- The RTS can be increased to cover a larger portion of the City's operational costs and even some/all of the capital outlay and debt service; however, keep in mind that a higher fixed charge impacts the low-volume users more significantly.

Utility Rate Model Summary (continued)

- The City of Rochester Hills will continue to purchase water from the Great Lakes Water Authority through its membership in the North Oakland County Water Authority (NOCWA). No known changes to contract pending.

- The City of Rochester Hills will continue to pay Oakland County Water Resource Commissioner (OCWRC) to provide wastewater treatment. No known changes to contract pending.

- The most significant assumption included in the model is related to capital outlay. The model includes the current proposed City capital improvement plan.
  - Water - $31.7M over 5 years, $62.6M over 10 years
  - Sewer - $11.3M over 5 years

- Debt service –
  - The Water System currently has no long-term debt. No new debt to be issued for Water in the next 5 years.
  - The City does have a proportional system share of certain OCWRC debt issues. Sewer will continue to cost share in the CRWRRF (Clinton River Water Resource Recovery Facility) Phase I and II Projects, by utilizing the CWSRF financing option. The estimated principal costs of these two projects are approximately $9.1 Million.

Rate Model – Step 1
Calculate the Total Cost Pool

Rate Model – Step 2

Calculate costs to be covered by rates

Rate Model – Step 3
Calculate the Variable Rate

Rate Model – Step 4 (Multi-Year Models) Smoothing Increases Over Time

What is “Target Working Capital”?

- Maintain a predetermined amount of cash and current assets (net of liabilities) in the bank at the end of the model.

- **4 “buckets” of working capital**
  1. Operating reserve – 90 days
  2. Next year’s debt service payments (sewer only)
  3. Emergency capital replacement – 2% of the NBV of capital assets
  4. Planned capital replacement - $6M for sewer and $25M for water (for years 6-10 construction).

- As of 12/31/2025, the City’s starting working capital (total) was approx. $33.3M for water and $13.2M for sewer. After 5 years, the water system will maintain its working capital at $33.6M and keep the 4 buckets noted above full. The sewer system will maintain the target working capital of $12.4M based on the calculation of the 4 buckets above.

Rate Model – Step 1
Calculate the Total Cost Pool

- Internal Operations –Includes inflationary cost increases over the next 5 years.

- Water Purchase/Sewer Treatment Increase (annual)
  - 5.5% water, 10.6% sewer (2026-2028), 5.5% sewer (2029-2030)

- Capital Outlay
  - Capital outlay has been based on the City's capital improvement plan.
    - W - $31.7M over 5 years, $62.6M over 10 years for multiple water main replacements
    - S - $11.3M over 5 years, for completion of SCADA system, lining projects every other year, and one investigation project

- Debt Service
  - Sewer Only – There are four sewer cost sharing agreements that are included in the model totaling over $9M in principal owed. These projects are for CRWRRF Phase I and II.

Rate Model – Step 2
Calculate costs to be covered by rates - Fixed Charges

- The City charges separate **Readiness To Serve (RTS)** also known as Customer charges for both W&S regardless of meter size. Both generate approximately $450k per year each.
  - Some communities will "tie-bar" the RTS to cover a set percentage of administrative costs. The base model, Option #1, we have created does not include any such adjustments. This base model, which mirrors your current rate structure, covers 7% and 11% of administrative costs for water and sewer, respectively.
  - If the City were to tie the Readiness to Serve fee to be 12% of administrative costs (Option #2):
    - Water Only fee per bill would change from $3.06 to $3.46.
    - Sewer Only fee per bill would change from $3.06 to $2.93.
  - If the City were to tie the Readiness to Serve fee to be 20% of administrative costs (Option #3):
    - Water Only fee per bill would change from $3.06 to $5.79.
    - Sewer Only fee per bill would change from $3.06 to $4.89.

Rate Model – Step 2
Calculate costs to be covered by rates - Fixed Charges

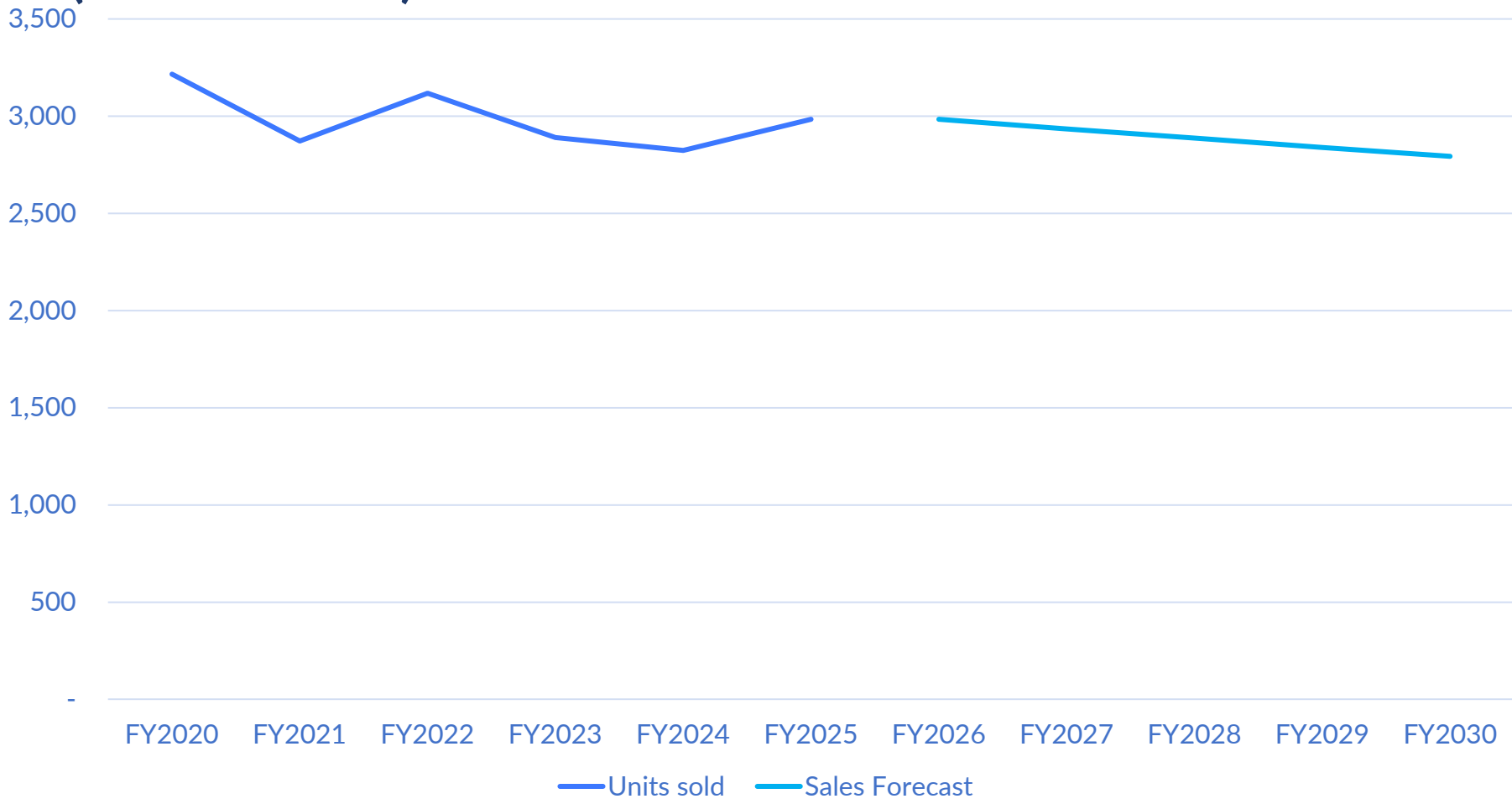
- Currently, the City has approximately 9,700 residents that have two water meters, due to having an AM (Area Maintenance meter). These customers currently have one water customer charge. Proposed Options #2 and #3 increase the charge for two meters to two water readiness to serve charges.

- The American Water Works Association (AWWA) provides a graduated scale for Readiness to Serve charges for water and sewer (a 2-inch meter pays more than a 1-inch meter; a 4-inch pays more than a 2-inch, etc…). Proposed Options #2 and #3 , incorporate the AWWA charge ratios for meters sized 1.5” and up.

- This change would affect 1,934 of the City’s 36,866 meters (1.5 inch to 10 inch). Predominantly commercial customers.

Rate Model – Step 3

Calculate the Variable Rate – Water Units Sold (in millions)



Note: Estimated 1.6% annual decrease in units sold based on recent activity.

Rate Model – Step 3

Calculate the Variable Rate – Sewer Units Sold (in millions)

Note: Due to water-only customers and irrigation meters, Sewer units sold are less than water units sold. Sewer units sold estimated to be 77% of water units sold based on recent history.

Options for 7/1/2026

Option 1: Keep rate structure as is

Option 2: Implement AWWA ratios, Ready to Serve fee (RTS) set to recover 12% of Administrative Costs, and charge a second water RTS fee to customers with 2 meters.

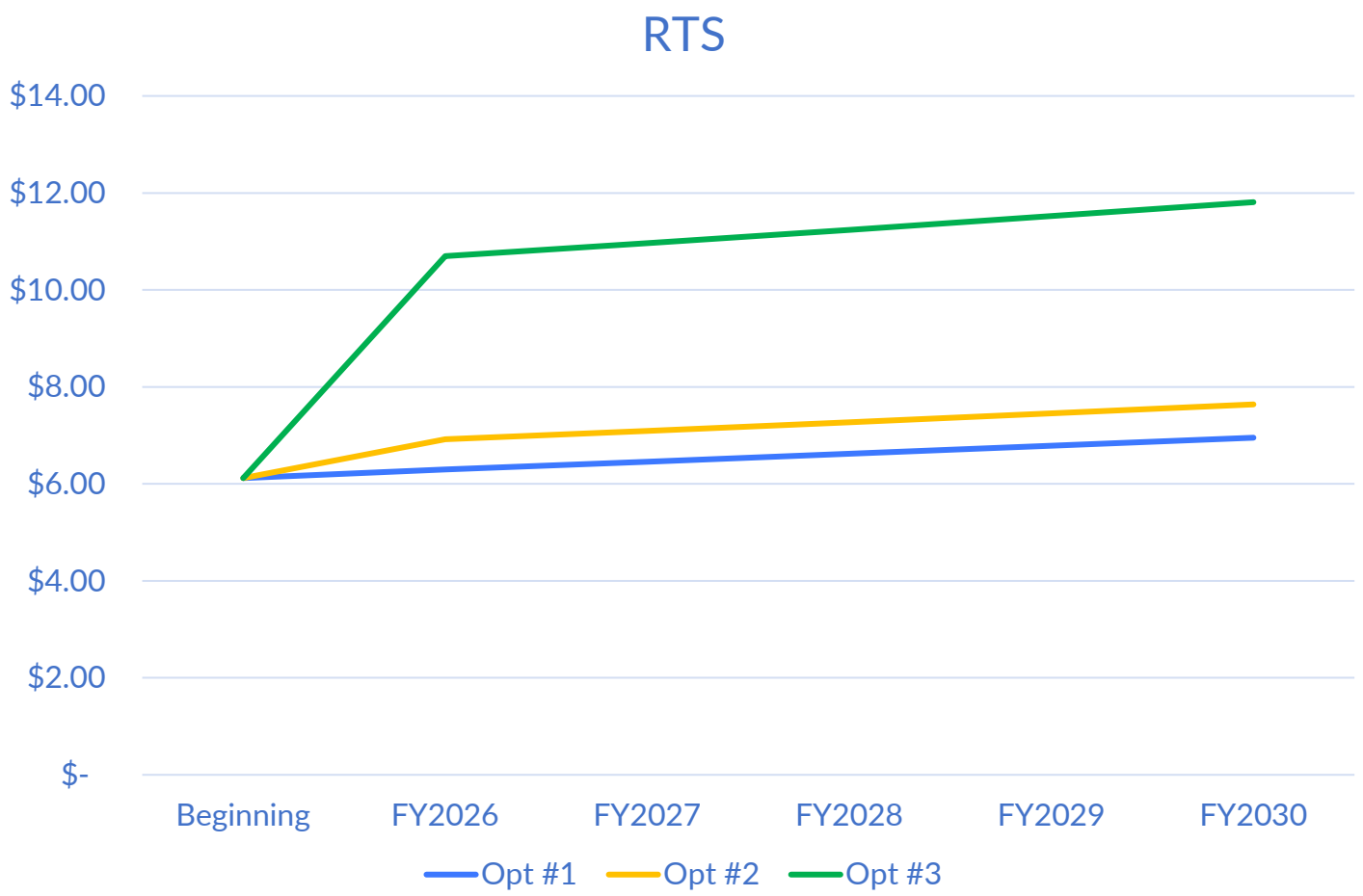
Option 3: Same as Option 2, but RTS will be set to recover 20% of Administrative costs.

Rate Impact by Option

	Option 1	Option 2	Option 3
Water Rate Increase	6.0%	5.5%	4.5%
Sewer Rate Increase	2.5%	2.4%	1.6%
Water RTS Increase	3%	13%	89%
Sewer RTS Incr/(Decr)	3%	(4%)	60%
New Water Rate per 100cf	$8.27	$8.23	$8.15
New Sewer Rate per 100cf	$7.27	$7.27	$7.21
Combined W/S per 100cf	**$15.54**	**$15.50**	**$15.36**
New Water RTS **per bill**	$3.15	$3.46	$5.79
New Sewer RTS **per bill**	$3.15	$2.93	$4.89
Combined W/S RTS per bill	**$6.30**	**$6.39**	**$10.68**
Water Capital Reserve for yrs 6-10	$25M	$25M	$25M
Sewer Capital Reserve for yrs 6-10	$6M	$6M	$6M

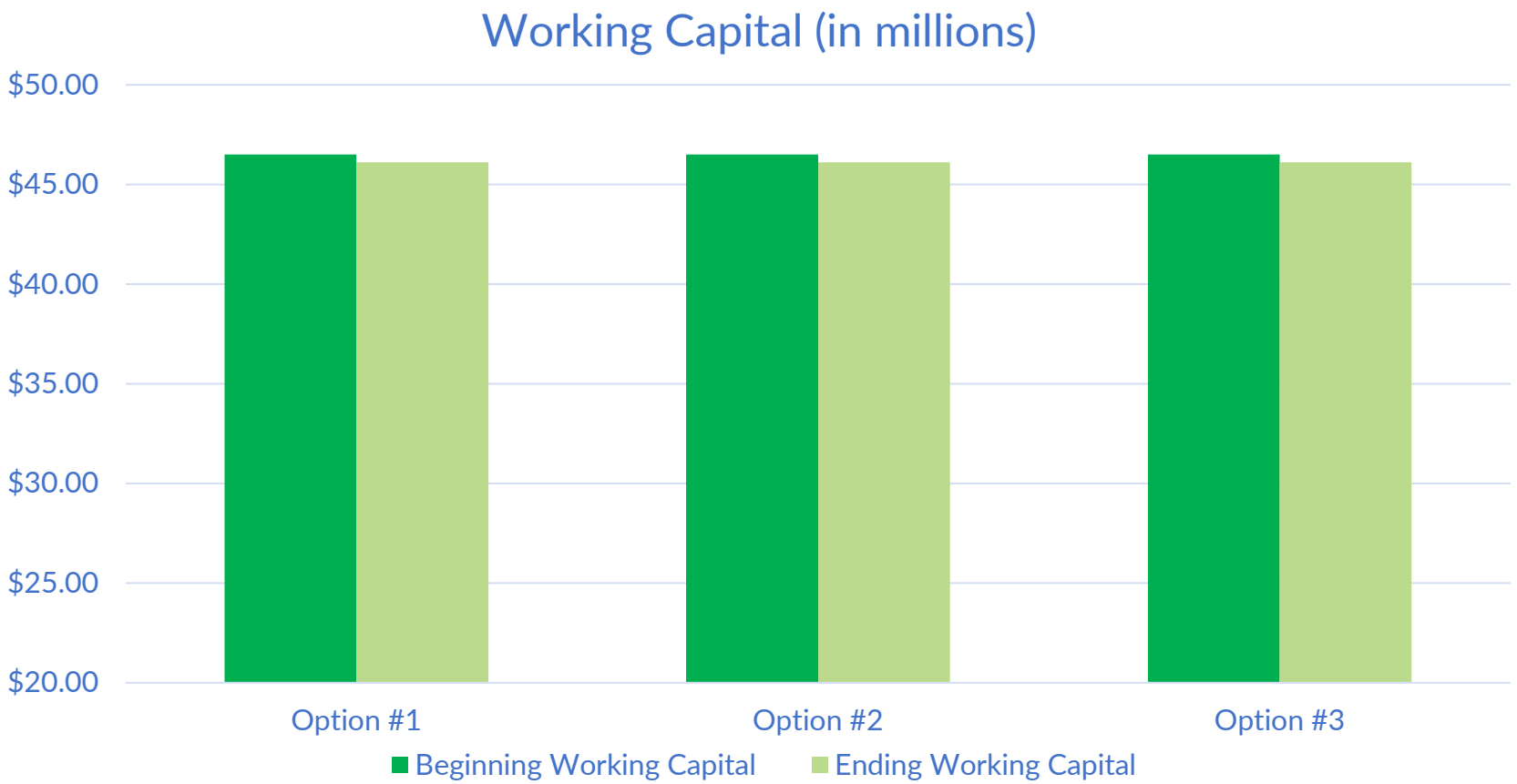
Proposed RTS Increases

Option #1 is the City's current RTS plus annual inflation. Option #2 ties the RTS to 12% of operating expenses. Option #3 ties the RTS to 20% of operating expenses. Yearly increases are assumed to be approximately 2.5% per year.



Working Capital Changes

All 3 options assume the same use of cash (expenses) through the life of the model. Cash receipts (revenue) are different between the models due to the mix of RTS and variable commodity rates. For Options #1, #2, and #3, working capital fluctuates a bit year to year, but all 3 models ends the five years with the exact same amount, allowing the City to continue its approach of self-financing projects in the future.



Effect on Customers

Example #1 - single person resident; 7 units per BILL; 1 meter

	Current	Option #1	Option #2	Option #3
RTS - Water	$ 3.06	$ 3.15	$ 3.46	$ 5.79
RTS - Sewer	$ 3.06	$ 3.15	$ 2.93	$ 4.89
Water Charge	$ 54.60	$ 57.89	$ 57.61	$ 57.05
Sewer Charge	$ 49.70	$ 50.89	$ 50.89	$ 50.47
Total	$ 110.42	$ 115.08	$ 114.89	$ 118.20
$$ increase (per bill)		$ 4.66	$ 4.47	$ 7.78
% Change		4.2%	4.0%	7.0%

Example #2 - single person resident; 7 units per BILL; 2 meters; Assume 2 units irrigation

	Current	Option #1	Option #2	Option #3
RTS - Water	$ 3.06	$ 3.15	$ 6.92	$ 11.58
RTS - Sewer	$ 3.06	$ 3.15	$ 2.93	$ 4.89
Water Charge	$ 54.60	$ 57.89	$ 57.61	$ 57.05
Sewer Charge	$ 49.70	$ 50.89	$ 36.35	$ 36.05
Total	$ 110.42	$ 115.08	$ 103.81	$ 109.57
$$ increase (per bill)		$ 4.66	$ (6.61)	$ (0.85)
% Change		4.2%	-6.0%	-0.8%

A B

These are lower-volume customers. #1 has one meter and #2 has 2 meters.

A - The 2nd meter more than pays for itself with 12% RTS.

B – The 2nd meter with the 20% RTS approximately breaks even, with an 85 cent decrease.

Effect on Customers

Example #3 - family of 4; 28 units per BILL; 1 meter

	Current	Option #1	Option #2	Option #3
RTS - Water	$ 3.06	$ 3.15	$ 3.46	$ 5.79
RTS - Sewer	$ 3.06	$ 3.15	$ 2.93	$ 4.89
Water Charge	$ 218.40	$ 231.56	$ 230.44	$ 228.20
Sewer Charge	$ 198.80	$ 203.56	$ 203.56	$ 201.88
Total	$ 423.32	$ 441.42	$ 440.39	$ 440.76
$$ increase (per bill)		$ 18.10	$ 17.07	$ 17.44
% Change		4.3%	4.0%	4.1%

Example #4 - family of 4; 28 units per BILL; 2 meters; assume 6 units of irrigation

	Current	Option #1	Option #2	Option #3
RTS - Water	$ 3.06	$ 3.15	$ 6.92	$ 11.58
RTS - Sewer	$ 3.06	$ 3.15	$ 2.93	$ 4.89
Water Charge	$ 218.40	$ 231.56	$ 230.44	$ 228.20
Sewer Charge	$ 198.80	$ 203.56	$ 159.94	$ 158.62
Total	$ 423.32	$ 441.42	$ 400.23	$ 403.29
$$ increase (per bill)		$ 18.10	$ (23.09)	$ (20.03)
% Change		4.3%	-5.5%	-4.7%

This is a family of 4 who are relatively high-volume users.

A – With higher volume, the sewer savings from the 2nd meter more than pays for itself with both a 12% and 20% RTS.

A

Effect on Customers

Example #5- Commercial business; 84 units per bill; 3-inch meters

	Current	Option #1	Option #2	Option #3
RTS - Water	$ 3.06	$ 3.15	$ 22.14	$ 37.05
RTS - Sewer	$ 3.06	$ 3.15	$ 18.75	$ 31.30
Water Charge	$ 655.20	$ 694.68	$ 691.32	$ 684.60
Sewer Charge	$ 596.40	$ 610.68	$ 610.68	$ 605.64
Total	$ 1,257.72	$ 1,311.66	$ 1,342.89	$ 1,358.59
$$ increase (per bill)		$ 53.94	$ 85.17	$ 100.87
% Change		4.3%	6.8%	8.0%

A

Example #6- Commercial business; 2,000 units per year; 8-inch meters

	Current	Option #1	Option #2	Option #3
RTS - Water	$ 3.06	$ 3.15	$ 110.72	$ 185.23
RTS - Sewer	$ 3.06	$ 3.15	$ 93.76	$ 156.52
Water Charge	$ 15,600.00	$ 16,540.00	$ 16,460.00	$ 16,300.00
Sewer Charge	$ 14,200.00	$ 14,540.00	$ 14,540.00	$ 14,420.00
Total	$ 29,806.12	$ 31,086.30	$ 31,204.48	$ 31,061.75
$$ increase (per bill)		$ 1,280.18	$ 1,398.36	$ 1,255.63
% Change		4.3%	4.7%	4.2%

B

These are 2 separate business. The first has a 3-inch meter and uses approximately 3X the water of the Family of 4.

The second is a hospital with extremely high volume and an 8-inch meter.

A - Switching to a RTS charge graduated by meter size has a negative impact on the lower volume business and really no impact to the high volume customer.

B - The high-volume customer has an economy of scale that offsets the increased RTS.

Next Steps

Consider the various rate setting options presented

Continue updating the capital plan

Continue updating the model on an annual basis as part of the budget process.

Rate Impact by Option

	Option 1	Option 2	Option 3
Water Rate Increase	6.0%	5.5%	4.5%
Sewer Rate Increase	2.4%	2.4%	1.6%
Water RTS Increase	3%	13%	89%
Sewer RTS Incr/(Decr)	3%	(4%)	60%
New Water Rate per 100cf	$8.27	$8.23	$8.15
New Sewer Rate per 100cf	$7.27	$7.27	$7.21
Combined W/S per 100cf	**$15.54**	**$15.50**	**$15.36**
New Water RTS **per bill**	$3.15	$3.46	$5.79
New Sewer RTS **per bill**	$3.15	$2.93	$4.89
Combined W/S RTS per bill	**$6.30**	**$6.39**	**$10.68**
Water Capital Reserve for yrs 6-10	$25M	$25M	$25M
Sewer Capital Reserve for yrs 6-10	$6M	$6M	$6M

Thank you for the opportunity to serve the City of Rochester Hills.

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