

Town of Reading Water and Sewer FY 2024 Rate Study

The Abrahams Group

March 2023

Rate Study Objectives

- Review historical and current water and sewer fund financials.
- Use historical and current financial and billing data to project revenues and expenses over a five-year period of FY 2024 to FY 2028.
- Create rate options to ensure the funds remain in good financial standing.
 - Including targeting a retained earnings balance of 20% of fund expenses.
- Consider the implementation of a tiered rate structure for water and sewer.
 - Compile billing data into a file that can be used to project revenues from a tiered rate structure.
 - Mass. General Law states that MWRA communities shall have a base rate that “shall be increased at an increasing block rate to fairly reflect the resource demand and consumption of high-volume users of water”.

Current Rate Structure

The Town bills users quarterly, typically in July, October, January, and April.

Water

- Flat Rate of \$11.41 per 100 cubic feet of usage
- Minimum Charge of \$21.80 per bill

Sewer

- Flat Rate of \$10.86 per 100 cubic feet of flow
- Minimum Charge of \$21.80 per bill

FY 2023 Projections

FY 2023 projections in the financial analyses indicate:

Water

- Projected deficit of \$300,000
- Retained earnings of \$3.7 million, or 41.5% of expenses

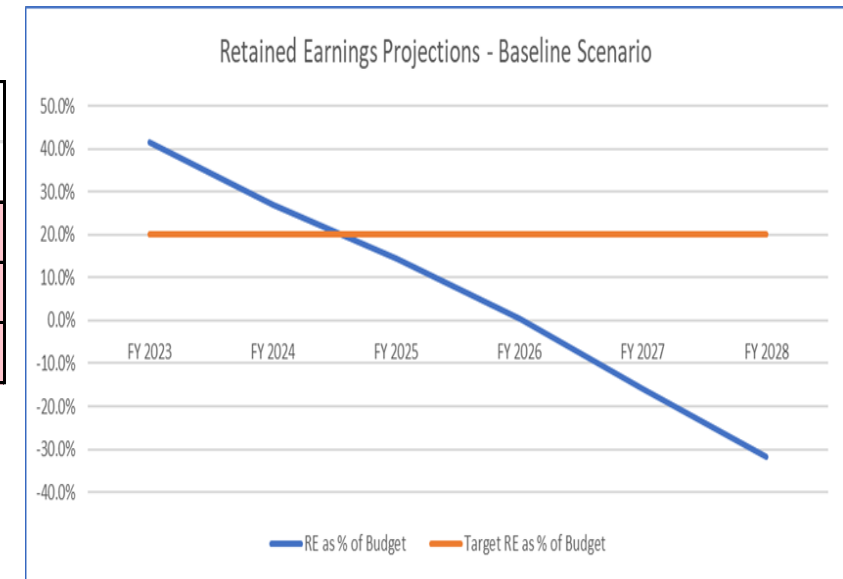
Sewer

- Projected surplus of \$60,000
- Retained earnings of \$7.0 million, or 92.7% of expenses

Projections – FY 2024 to 2028 – Baseline – Water

The following projections are from the baseline scenario, which assumes no rate action. The graph contains projected retained earnings.

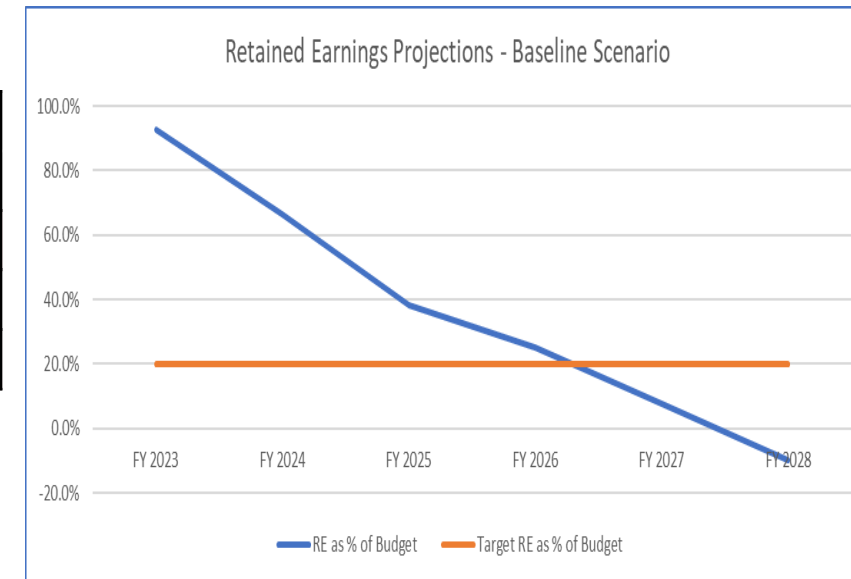
Baseline	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
	PROJECTED	PROJECTED	PROJECTED	PROJECTED	PROJECTED
Surplus/Deficit	\$ (758,101)	\$ (1,340,108)	\$ (1,019,981)	\$ (1,262,771)	\$ (1,472,979)
Projected Retained Earnings	\$ 2,315,451	\$ 1,295,470	\$ 32,699	\$ (1,440,280)	\$ (2,913,259)
RE as % of Budget	27.0%	14.4%	0.4%	-16.1%	-31.8%



Projections – FY 2024 to 2028 – Baseline – Sewer

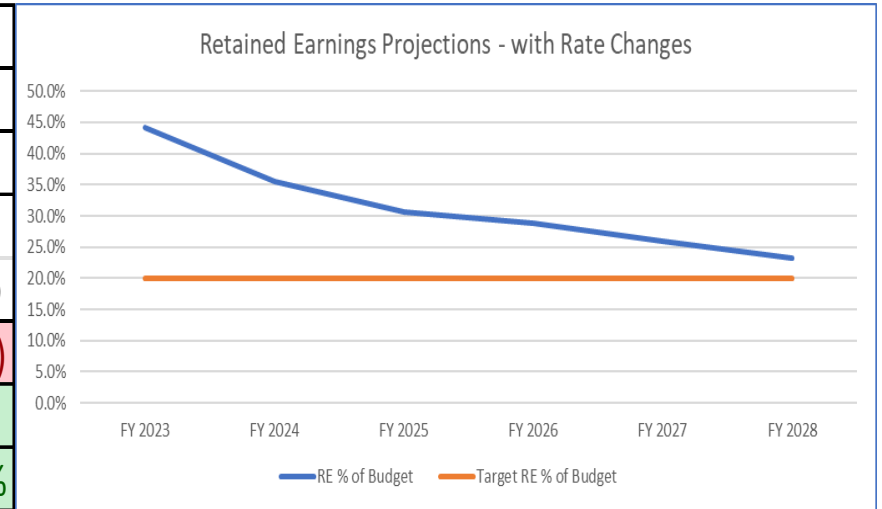
The following projections are from the baseline scenario, which assumes no rate action. The graph contains projected retained earnings.

Baseline	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
	PROJECTED	PROJECTED	PROJECTED	PROJECTED	PROJECTED
Surplus/Deficit	\$ (214,062)	\$ (1,995,786)	\$ (1,429,294)	\$ (1,386,617)	\$ (1,542,027)
Projected Retained Earnings	\$ 5,020,167	\$ 3,590,873	\$ 2,204,256	\$ 662,229	\$ (879,798)
RE as % of Budget	66.3%	38.4%	25.1%	7.6%	-9.9%



Rate Option 1 – Rate Changes Only – Water

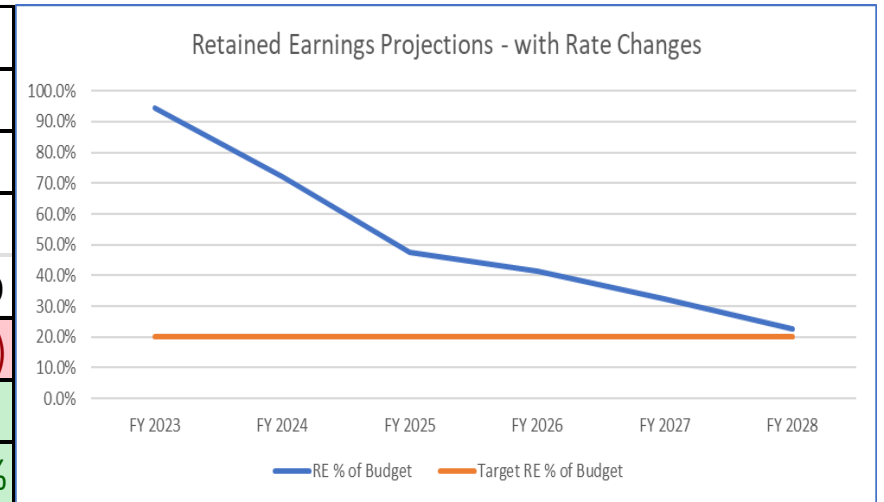
Rate Changes:	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
	3.25%	3.25%	3.25%	3.25%	3.25%
New Rate	\$ 11.41	\$ 11.78	\$ 12.16	\$ 12.56	\$ 12.97
Rate Impact	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
	PROJECTED	PROJECTED	PROJECTED	PROJECTED	PROJECTED
Surplus/Deficit	\$ (518,342)	\$ (852,797)	\$ (277,072)	\$ (255,958)	\$ (193,684)
Projected Retained Earnings	\$3,042,521	\$2,765,449	\$2,509,491	\$2,315,807	\$2,122,123
RE % of Budget	35.4%	30.6%	28.8%	25.9%	23.2%



User Impact (per Bill) - Water Bills Only			New Bills				
User Type	Usage	Current Bill	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Low-End User	500	\$ 57.05	\$ 58.90	\$ 60.82	\$ 62.80	\$ 64.84	\$ 66.94
Avg. Residential User (45 gpd)	1,500	\$ 171.15	\$ 176.71	\$ 182.46	\$ 188.39	\$ 194.51	\$ 200.83
Avg. Residential User (65 gpd)	2,200	\$ 251.02	\$ 259.18	\$ 267.60	\$ 276.30	\$ 285.28	\$ 294.55
Large Residential User	4,500	\$ 513.45	\$ 530.14	\$ 547.37	\$ 565.16	\$ 583.52	\$ 602.49
Large Commercial User	10,000	\$ 1,141.00	\$ 1,178.08	\$ 1,216.37	\$ 1,255.90	\$ 1,296.72	\$ 1,338.86
Very Large Commercial User	100,000	\$11,410.00	\$11,780.83	\$12,163.70	\$12,559.02	\$12,967.19	\$13,388.62

Rate Option 1 – Rate Changes Only – Sewer

Rate Changes:	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
	2.00%	2.00%	2.00%	2.00%	2.00%
New Rate	\$ 10.86	\$ 11.08	\$ 11.30	\$ 11.52	\$ 11.76
Rate Impact	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
	PROJECTED	PROJECTED	PROJECTED	PROJECTED	PROJECTED
Surplus/Deficit	\$ (73,341)	\$ (1,711,530)	\$ (998,631)	\$ (806,620)	\$ (809,710)
Projected Retained Earnings	\$5,445,144	\$ 4,446,513	\$3,639,893	\$2,830,183	\$2,020,473
RE % of Budget	71.9%	47.6%	41.4%	32.4%	22.7%



User Impact (per Bill) - Sewer Bills Only			New Bills				
User Type	Usage	Current Bill	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Low-End User	500	\$ 54.30	\$ 55.39	\$ 56.49	\$ 57.62	\$ 58.78	\$ 59.95
Avg. Residential User (45 gpd)	1,500	\$ 162.90	\$ 166.16	\$ 169.48	\$ 172.87	\$ 176.33	\$ 179.85
Avg. Residential User (65 gpd)	2,200	\$ 238.92	\$ 243.70	\$ 248.57	\$ 253.54	\$ 258.61	\$ 263.79
Large Residential User	4,500	\$ 488.70	\$ 498.47	\$ 508.44	\$ 518.61	\$ 528.98	\$ 539.56
Large Commercial User	10,000	\$ 1,086.00	\$ 1,107.72	\$ 1,129.87	\$ 1,152.47	\$ 1,175.52	\$ 1,199.03
Very Large Commercial User	100,000	\$10,860.00	\$ 11,077.20	\$11,298.74	\$11,524.72	\$11,755.21	\$11,990.32

Rate Option 2 – Tier Structure

Objectives:

- Set tiers and rates per tier to recover a similar amount of revenue as in FY 2023. This does not include a rate increase for FY 2024.
- Aim to minimize impact on users' bills, avoiding large swings in bills.
 - After initial implementation, can consider different changes to different tiers.
- Create four tiers, with the option to switch to five in the future.

Water

Tiers	Start	End	FY 2024
1	-	500	\$ 10.10
2	501	1,000	\$ 10.80
3	1,001	2,500	\$ 11.70
4	2,501	5,000	\$ 13.00
5	5,001	+	\$ 13.00

Sewer

Tiers	Start	End	FY 2024
1	-	500	\$ 10.00
2	501	1,000	\$ 10.50
3	1,001	2,500	\$ 10.70
4	2,501	5,000	\$ 12.00
5	5,001	+	\$ 12.00

Rate Option 2 – Tier Structure – Water

Rate Changes:	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
	Tiers	4.50%	4.50%	4.50%	4.50%
Rate Impact	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
	PROJECTED	PROJECTED	PROJECTED	PROJECTED	PROJECTED
Surplus/Deficit	\$ (764,719)	\$ (1,015,048)	\$ (348,318)	\$ (228,909)	\$ (60,617)
Projected Retained Earnings	\$2,633,893	\$ 2,285,575	\$2,056,666	\$1,996,049	\$1,935,432
RE % of Budget	30.7%	25.3%	23.6%	22.3%	21.1%

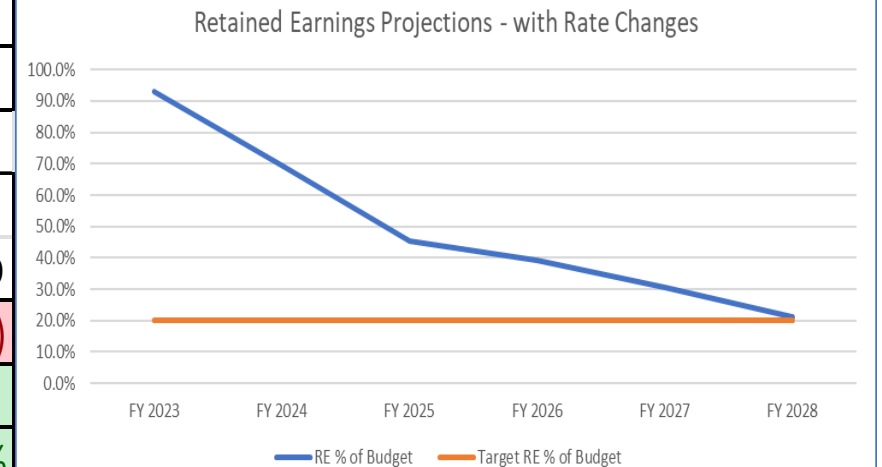
Retained Earnings Projections - with Rate Changes

Fiscal Year	RE % of Budget	Target RE % of Budget
FY 2023	~42.0%	20.0%
FY 2024	~30.7%	20.0%
FY 2025	25.3%	20.0%
FY 2026	23.6%	20.0%
FY 2027	22.3%	20.0%
FY 2028	21.1%	20.0%

User Impact (per Bill) - Water Bills Only			New Bills				
User Type	Usage	Current Bill	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Low-End User	500	\$ 57.05	\$ 50.50	\$ 52.77	\$ 55.15	\$ 57.63	\$ 60.22
Avg. Residential User (45 gpd)	1,500	\$ 171.15	\$ 163.00	\$ 170.34	\$ 178.00	\$ 186.01	\$ 194.38
Avg. Residential User (65 gpd)	2,200	\$ 251.02	\$ 244.90	\$ 255.92	\$ 267.44	\$ 279.47	\$ 292.05
Large Residential User	4,500	\$ 513.45	\$ 540.00	\$ 564.30	\$ 589.69	\$ 616.23	\$ 643.96
Large Commercial User	10,000	\$ 1,141.00	\$ 1,255.00	\$ 1,311.48	\$ 1,370.49	\$ 1,432.16	\$ 1,496.61
Very Large Commercial User	100,000	\$11,410.00	\$ 12,955.00	\$13,537.98	\$14,147.18	\$14,783.81	\$15,449.08

Rate Option 2 – Tier Structure – Sewer

Rate Changes:	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
	Tiers	2.50%	2.50%	2.50%	2.50%
Rate Impact	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
	PROJECTED	PROJECTED	PROJECTED	PROJECTED	PROJECTED
Surplus/Deficit	\$ (177,548)	\$ (1,782,458)	\$ (1,034,731)	\$ (806,289)	\$ (771,290)
Projected Retained Earnings	\$5,270,009	\$ 4,235,278	\$ 3,428,989	\$2,657,699	\$1,886,409
RE % of Budget	69.6%	45.3%	39.0%	30.4%	21.2%



User Impact (per Bill) - Sewer Bills Only			New Bills				
User Type	Usage	Current Bill	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Low-End User	500	\$ 54.30	\$ 50.00	\$ 51.25	\$ 52.53	\$ 53.84	\$ 55.19
Avg. Residential User (45 gpd)	1,500	\$ 162.90	\$ 156.00	\$ 159.90	\$ 163.90	\$ 167.99	\$ 172.19
Avg. Residential User (65 gpd)	2,200	\$ 238.92	\$ 230.90	\$ 236.67	\$ 242.59	\$ 248.65	\$ 254.87
Large Residential User	4,500	\$ 488.70	\$ 503.00	\$ 515.58	\$ 528.46	\$ 541.68	\$ 555.22
Large Commercial User	10,000	\$ 1,086.00	\$ 1,163.00	\$ 1,192.08	\$ 1,221.88	\$ 1,252.42	\$ 1,283.73
Very Large Commercial User	100,000	\$10,860.00	\$ 11,963.00	\$ 12,262.08	\$12,568.63	\$12,882.84	\$13,204.91