# ARTICLE 3 - WATER RATE INCREASE 



## WATER ENTERPRISE FUND

 OPTION 1 - 5\% INCREASE FISCAL YEAR 2021| Target Retained Earnings as \% of Budget: | 10.0 |
| :--- | :--- |


| Baseline | PROJECTED | PROJECTED | PROJECTED | $\begin{gathered} 2024 \\ \text { PROJECTED } \end{gathered}$ | PROJECTED |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Surplus/Deficit | $(966,047)$ | \$ (1,145,882) | \$ (1,190,093) | $(1,482,710)$ | $(1,689,727)$ |
| Projected Retained Earnings | 789,166 | $(356,715)$ | \$ (1,546,809) | $(3,029,519)$ | (4,719,246) |
| RE as \% of Budget | 10.4\% | -4.5\% | -19.3\% | -36.6\% | -55.6\% |
| Target RE as \% of Budget | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |

Retained Earnings Projections - Baseline Scenario


| Rate Increases: | $5.00 \%$ | $6.00 \%$ | $6.00 \%$ | $5.00 \%$ | $5.00 \%$ |
| :--- | :--- | :--- | :--- | :--- | :--- |


| Rate Impact | 2021 <br> PROJECTED | 2022 <br> PROJECTED | $2023$ <br> PROJECTED | 2024 <br> PROJECTED | 2025 <br> PROJECTED |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Surplus/Deficit | \$ (656,076) | \$ $(432,071)$ | \$ $(46,337)$ | \$ 36,333 | \$ 223,367 |
| Projected Retained Earnings | \$ 1,099,137 | \$ 667,066 | \$ 620,729 | \$ 657,062 | \$ 880,429 |
| RE \% of Budget | 14.5\% | 8.3\% | 7.7\% | 7.9\% | 10.4\% |
| Target RE \% of Budget | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |

Retained Earnings Projections - with Rate Changes

| 16.0\% |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| $\begin{aligned} & 14.0 \% \\ & 12.0 \% \end{aligned}$ |  |  |  |  |  |
| 10.0\% |  |  |  |  |  |
| 8.0\% |  |  |  |  |  |
| 6.0\% |  |  |  |  |  |
| 4.0\% |  |  |  |  |  |
| 2.0\% |  |  |  |  |  |
| 0.0\% |  |  |  |  |  |
|  | 2021 | 2022 | 2023 | 2024 | 2025 |
|  |  | RE \% | -Ta | dget |  |


| User Impact (per Bill) - Water Bills Only |  |  | New Bills |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| User Type | Usage | Current Bill | FY21 | FY22 | FY23 | FY24 | FY25 |
| Tier 1 User | 2,000 | \$ 92.70 | \$ 97.34 | \$ 103.18 | \$ 109.37 | \$ 114.83 | \$ 120.58 |
| Tier 2 User | 3,000 | \$ 142.10 | \$ 149.21 | \$ 158.16 | \$ 167.65 | \$ 176.03 | \$ 184.83 |
| Average Residential User | 4,234 | \$ 223.67 | \$ 234.85 | \$ 248.94 | \$ 263.88 | \$ 277.07 | \$ 290.93 |
| Avg. Res. User (for pres.) | 4,362 | \$ 232.13 | \$ 243.73 | \$ 258.36 | \$ 273.86 | \$ 287.55 | \$ 301.93 |
| Tier 3 User | 6,000 | \$ 340.40 | \$ 357.42 | \$ 378.87 | \$ 401.60 | \$ 421.68 | \$ 442.76 |
| Tier 4 User | 10,000 | \$ 670.80 | \$ 704.34 | \$ 746.60 | \$ 791.40 | \$ 830.97 | \$ 872.51 |
| Tier 5 User | 20,000 | \$ 1,591.80 | \$ 1,671.39 | \$ 1,771.67 | \$ 1,877.97 | \$ 1,971.87 | \$ 2,070.47 |
| Avg. Com. User (for pres.) | 24,527 | \$ 2,059.44 | \$ 2,162.41 | \$ 2,292.16 | \$ 2,429.69 | \$ 2,551.17 | \$ 2,678.73 |
| Tier 6 User | 50,000 | \$ 4,690.80 | \$ 4,925.34 | \$ 5,220.86 | \$ 5,534.11 | \$ 5,810.82 | \$ 6,101.36 |
| Tier 7 User | 100,000 | \$ 10,250.80 | \$ 10,763.34 | \$ 11,409.14 | \$ 12,093.69 | \$ 12,698.37 | \$ 13,333.29 |
| Tier 8 User | 200,000 | \$ 21,690.80 | \$ 22,775.34 | \$ 24,141.86 | \$ 25,590.37 | \$ 26,869.89 | \$ 28,213.39 |

Usage in cubic feet
The average residential user was determined using this formula
2.67 people per household $x 65$ gallons per day per person $=173.55$ gallons per household per day

One half of the year: 365 days $/ 2=182.5$
$173.55 \times 182.5=31,672.875$ gallons per household per half year
$31,672.875$ gallons $=4,234.0475$ cubic feet per half year
Note that median residential usage in 2015 billing data was 3,424 .
2015 was a dry year and outdoor water usage may have been high.

| WATER ENTERPRISE FUND |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OPTION 1-5\% INCREASE FISCAL YEAR 2021 |  |  |  |  |  |  |  |  |
|  | Budgeted | Actual | Projected | Projected | Projected | Projected | Projected |  |
| Description | FY 2020 | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 | Comments |
| Revenues |  |  | 5.00\% | 6.00\% | 6.00\% | 5.00\% | 5.00\% |  |
| Water User Charges | \$ 6,725,229 | \$ 5,849,674 | \$ 6,509,395 | \$ 7,030,715 | \$ 7,505,734 | \$ 7,881,020 | \$ 8,275,071 | Based on FY20 billing; FY20-23 adj. for pandemic, + rate increases here |
| Water Liens on User Charges | - | 277,965 | 207,383 | 416,807 | 351,565 | 316,408 | 316,408 | Five-year average from FY16-FY20; assume level; FY21-23 adj. for pandemic |
| Interest on User Charges | - | 23,107 | 26,784 | 26,784 | 26,784 | 26,784 | 26,784 | Five-year average from FY16-FY20; assume level |
| Penalty on User Charges | - | 7,436 | 13,465 | 13,465 | 13,465 | 13,465 | 13,465 | Five-year average from FY16-FY20; assume level |
| Non-User Charges Fees | - | 84,043 | 31,183 | 31,183 | 31,183 | 31,183 | 31,183 | Five-year average from FY15-FY19, in case \$50k connection here; assume level |
| Miscellaneous Charges | - | 14,412 | 13,145 | 13,145 | 13,145 | 13,145 | 13,145 | Five-year average from FY16-FY20; assume level |
| Water Liens on Fees | - | 90 | 3,420 | 3,420 | 3,420 | 3,420 | 3,420 | Five-year average from FY16-FY20; assume level |
| Water Liens on Interest | - | 31,431 | 32,191 | 32,191 | 32,191 | 32,191 | 32,191 | Five-year average from FY16-FY20; assume level |
| Total Revenues | \$ 6,725,229 | \$ 6,288,157 | \$ 6,836,965 | \$ 7,567,709 | \$ 7,977,486 | \$ 8,317,616 | \$ 8,711,667 |  |
| Available Funds |  |  |  |  |  |  |  |  |
| Prior Year Carryover | \$ 47,441 | \$ | \$ 67,275 | \$ | \$ | \$ | \$ | Funding source, reserved at end of prior year, for encumbrances |
| Retained Earnings Appropriated | - | - | - | - | - | - | - | Retained Earnings used to balance the budget |
| Total Revenues / Available Funds | \$ 6,772,670 | \$ 6,288,157 | \$ 6,904,240 | \$ 7,567,709 | \$ 7,977,486 | \$ 8,317,616 | \$ 8,711,667 |  |
| Expenditures |  |  |  |  |  |  |  |  |
| Salaries | \$ 338,518 | \$ 337,275 | \$ 360,947 | \$ 369,971 | \$ 379,220 | \$ 388,700 | \$ 398,418 | FY21 number is from Budget; $2.5 \%$ increase yearly |
| MWRA Assessment | 4,221,837 | 4,220,394 | 4,465,635 | 4,975,454 | 4,848,626 | 5,052,268 | 5,264,463 | FY21 number budgeted; FY22 projected; FY23 on typical 4.2\% increase |
| Other Expenses | 645,595 | 462,480 | 730,575 | 676,566 | 690,097 | 703,899 | 717,977 | FY21 number is from Budget, incl. FY20 encumbrances; 2\% increase yearly |
| Capital Outlay | 116,496 | 26,496 | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | FY21 number is from Budget; budget number carried forward |
| Existing Debt Service | 796,313 | 796,312 | 1,202,949 | 1,160,200 | 1,059,475 | 951,975 | 867,760 | FY20 and FY21 numbers are from budgets; Rest from "Existing Debt Service" tab |
| New Debt Service | - | - | - | - | 211,000 | 330,775 | 367,300 | See "New Debt Service" tab; Debt projections based on capital plan |
| Short Term Debt | 30,000 | 1,347 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | FY21 number is from Budget; budget number carried forward |
| Indirect Costs | 580,799 | 580,799 | 654,440 | 670,801 | 687,571 | 704,760 | 722,379 | FY21 from Budget; increase 2.5\% yearly |
| Funding of OPEB | 43,112 | 43,112 | 40,770 | 41,789 | 42,834 | 43,905 | 45,002 | FY21 number is from Budget; $2.5 \%$ increase yearly |
| Total Expenditures | \$ 6,772,670 | \$ 6,468,216 | \$7,560,316 | \$ 7,999,781 | \$ 8,023,823 | \$ 8,281,282 | \$ 8,488,300 |  |
| Excess (Deficit) of Revenues and |  |  |  |  |  |  |  |  |
| Available Funds > Expenditures | \$ | \$ $(180,059)$ | \$ (656,076) | \$ (432,071) | \$ $(46,337)$ | \$ 36,333 | \$ 223,367 |  |
|  |  |  |  |  |  |  |  |  |
| Retained Earnings Projections |  |  |  |  |  |  |  |  |
| Certified Retained Earnings July 1, 2020 |  | \$ 1,755,213 |  |  |  |  |  |  |
| Retained Earnings at Start of the FY Listed |  |  | \$ 1,755,213 | \$ 1,099,137 | \$ 667,066 | \$ 620,729 | \$ 657,062 |  |
| Surplus/(Deficit) Current FY |  |  | \$ (656,076) | \$ $(432,071)$ | \$ $(46,337)$ | \$ 36,333 | \$ 223,367 |  |
| Projected Retained Earnings at End of FY |  |  | \$ 1,099,137 | \$ 667,066 | \$ 620,729 | \$ 657,062 | \$ 880,429 |  |
| Retained Earnings as \% of Oper. Budget |  | 27.1\% | 14.5\% | 8.3\% | 7.7\% | 7.9\% | 10.4\% |  |

## WATER ENTERPRISE FUND

 OPTION 2 - 4\% INCREASE FISCAL YEAR 2021| Target Retained Earnings as \% of Budget: | 10.0 |
| :--- | :--- |


| Baseline | PROJECTED | PROJECTED | PROJECTED | $\begin{gathered} 2024 \\ \text { PROJECTED } \end{gathered}$ | PROJECTED |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Surplus/Deficit | $(966,047)$ | \$ (1,145,882) | \$ (1,190,093) | $(1,482,710)$ | $(1,689,727)$ |
| Projected Retained Earnings | 789,166 | $(356,715)$ | \$ (1,546,809) | $(3,029,519)$ | (4,719,246) |
| RE as \% of Budget | 10.4\% | -4.5\% | -19.3\% | -36.6\% | -55.6\% |
| Target RE as \% of Budget | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |

Retained Earnings Projections - Baseline Scenario


| Rate Increases: | $4.00 \%$ | $6.00 \%$ | $6.00 \%$ | $6.00 \%$ | $6.00 \%$ |
| :--- | :--- | :--- | :--- | :--- | :--- |


| Rate Impact | $\mathbf{2 0 2 1}$ |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  | PROJECTED |\(\left.\quad \begin{array}{c}\mathbf{2 0 2 2} <br>

PROJECTED\end{array}\right)\)

Retained Earnings Projections - with Rate Changes

| 16.0\% |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| 12.0\% | , |  |  |  |  |
| 10.0\% |  |  |  |  |  |
| 8.0\% |  |  |  |  |  |
| 6.0\% |  |  |  |  |  |
| 4.0\% |  |  |  |  |  |
| 2.0\% |  |  |  |  |  |
| 0.0\% |  |  |  |  |  |
|  | 2021 | 2022 | 2023 | 2024 | 2025 |
|  |  | RE \% | -Ta | dget |  |


| User Impact (per Bill) - Water Bills Only |  |  | New Bills |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| User Type | Usage | Current Bill | FY21 | FY22 | FY23 | FY24 | FY25 |
| Tier 1 User | 2,000 | \$ 92.70 | \$ 96.41 | \$ 102.19 | \$ 108.32 | \$ 114.82 | \$ 121.71 |
| Tier 2 User | 3,000 | \$ 142.10 | \$ 147.78 | \$ 156.65 | \$ 166.05 | \$ 176.01 | \$ 186.57 |
| Average Residential User | 4,234 | \$ 223.67 | \$ 232.61 | \$ 246.57 | \$ 261.37 | \$ 277.05 | \$ 293.67 |
| Avg. Res. User (for pres.) | 4,362 | \$ 232.13 | \$ 241.41 | \$ 255.90 | \$ 271.25 | \$ 287.53 | \$ 304.78 |
| Tier 3 User | 6,000 | \$ 340.40 | \$ 354.02 | \$ 375.26 | \$ $\quad 397.77$ | \$ 421.64 | \$ 446.94 |
| Tier 4 User | 10,000 | \$ 670.80 | \$ 697.63 | \$ 739.49 | \$ 783.86 | \$ 830.89 | \$ 880.74 |
| Tier 5 User | 20,000 | \$ 1,591.80 | \$ 1,655.47 | \$ 1,754.80 | \$ 1,860.09 | \$ 1,971.69 | \$ 2,090.00 |
| Avg. Com. User (for pres.) | 24,527 | \$ 2,059.44 | \$ 2,141.82 | \$ 2,270.33 | \$ 2,406.55 | \$ 2,550.94 | \$ 2,703.99 |
| Tier 6 User | 50,000 | \$ 4,690.80 | \$ 4,878.43 | \$ 5,171.14 | \$ 5,481.41 | \$ 5,810.29 | \$ 6,158.91 |
| Tier 7 User | 100,000 | \$ 10,250.80 | \$ 10,660.83 | \$ 11,300.48 | \$ 11,978.51 | \$ 12,697.22 | \$ 13,459.05 |
| Tier 8 User | 200,000 | \$ 21,690.80 | \$ 22,558.43 | \$ 23,911.94 | \$ 25,346.65 | \$ 26,867.45 | \$ 28,479.50 |

Usage in cubic feet
The average residential user was determined using this formula
2.67 people per household $x 65$ gallons per day per person $=173.55$ gallons per household per day

One half of the year: 365 days $/ 2=182.5$
$173.55 \times 182.5=31,672.875$ gallons per household per half year
$31,672.875$ gallons $=4,234.0475$ cubic feet per half year
Note that median residential usage in 2015 billing data was 3,424 .
2015 was a dry year and outdoor water usage may have been high.


## WATER ENTERPRISE FUND

 OPTION 3 - 3\% INCREASE FISCAL YEAR 2021| Target Retained Earnings as \% of Budget: | $10.0 \%$ |
| :--- | :--- |


| Baseline | PROJECTED | PROJECTED | PROJECTED | $\begin{gathered} 2024 \\ \text { PROJECTED } \end{gathered}$ | PROJECTED |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Surplus/Deficit | $(966,047)$ | \$ (1,145,882) | \$ (1,190,093) | $(1,482,710)$ | $(1,689,727)$ |
| Projected Retained Earnings | 789,166 | $(356,715)$ | \$ (1,546,809) | $(3,029,519)$ | (4,719,246) |
| RE as \% of Budget | 10.4\% | -4.5\% | -19.3\% | -36.6\% | -55.6\% |
| Target RE as \% of Budget | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |

Retained Earnings Projections - Baseline Scenario


| Rate Increases: | 3.00\% | 6.50\% | 6.50\% | 6.50\% | 6.50\% |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Rate Impact | $2021$ <br> PROJECTED | $2022$ <br> PROJECTED | $2023$ <br> PROJECTED | $2024$ <br> PROJECTED | $2025$ <br> PROJECTED |
|  |  |  |  |  |  |
| Surplus/Deficit | \$ (780,065) | \$ $(533,458)$ | \$ (119,680) | 70,810 | \$ 378,299 |
| Projected Retained Earnings | \$ 975,149 | \$ 441,691 | \$ 322,012 | \$ 392,821 | \$ 771,121 |
| RE \% of Budget | 12.9\% | 5.5\% | 4.0\% | 4.7\% | 9.1\% |
| Target RE \% of Budget | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |

Retained Earnings Projections - with Rate Changes

| $\begin{aligned} & 14.0 \% \\ & 12.0 \% \end{aligned}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| 12.0\% |  |  |  |  |  |
| 8.0\% |  |  |  |  |  |
| 6.0\% |  |  |  |  |  |
| 4.0\% |  |  |  |  |  |
| 2.0\% |  |  |  |  |  |
| 0.0\% |  |  |  |  |  |
|  | 2021 | 2022 | 2023 | 2024 | 2025 |
|  |  | RE \% | -Ta | udget |  |


| User Impact (per Bill) - Water Bills Only |  |  | New Bills |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| User Type | Usage | Current Bill | FY21 | FY22 | FY23 | FY24 | FY25 |
| Tier 1 User | 2,000 | \$ 92.70 | \$ 95.48 | \$ 101.69 | \$ 108.30 | \$ 115.34 | \$ 122.83 |
| Tier 2 User | 3,000 | \$ 142.10 | \$ 146.36 | \$ 155.88 | \$ 166.01 | \$ 176.80 | \$ 188.29 |
| Average Residential User | 4,234 | \$ 223.67 | \$ 230.38 | \$ 245.35 | \$ 261.30 | \$ 278.28 | \$ 296.37 |
| Avg. Res. User (for pres.) | 4,362 | \$ 232.13 | \$ 239.09 | \$ 254.63 | \$ 271.18 | \$ 288.81 | \$ 307.58 |
| Tier 3 User | 6,000 | \$ 340.40 | \$ 350.61 | \$ $\quad 373.40$ | \$ 397.67 | \$ 423.52 | \$ 451.05 |
| Tier 4 User | 10,000 | \$ 670.80 | \$ 690.92 | \$ 735.83 | \$ 783.66 | \$ 834.60 | \$ 888.85 |
| Tier 5 User | 20,000 | \$ 1,591.80 | \$ 1,639.55 | \$ 1,746.13 | \$ 1,859.62 | \$ 1,980.50 | \$ 2,109.23 |
| Avg. Com. User (for pres.) | 24,527 | \$ 2,059.44 | \$ 2,121.22 | \$ 2,259.10 | \$ 2,405.94 | \$ 2,562.33 | \$ 2,728.88 |
| Tier 6 User | 50,000 | \$ 4,690.80 | \$ 4,831.52 | \$ 5,145.57 | \$ 5,480.04 | \$ 5,836.24 | \$ 6,215.59 |
| Tier 7 User | 100,000 | \$ 10,250.80 | \$ 10,558.32 | \$ 11,244.62 | \$ 11,975.52 | \$ 12,753.92 | \$ 13,582.93 |
| Tier 8 User | 200,000 | \$ 21,690.80 | \$ 22,341.52 | \$ 23,793.72 | \$ 25,340.32 | \$ 26,987.44 | \$ 28,741.62 |

Usage in cubic feet
The average residential user was determined using this formula
2.67 people per household $x 65$ gallons per day per person $=173.55$ gallons per household per day

One half of the year: 365 days $/ 2=182.5$
$173.55 \times 182.5=31,672.875$ gallons per household per half year
$31,672.875$ gallons $=4,234.0475$ cubic feet per half year
Note that median residential usage in 2015 billing data was 3,424 .
2015 was a dry year and outdoor water usage may have been high.

| WATER ENTERPRISE FUND |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OPTION 3-3\% INCREASE FISCAL YEAR 2021 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | Budgeted | Actual | Projected | Projected | Projected | Projected | Projected |  |
| Description | FY 2020 | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 | Comments |
| Revenues |  |  | 3.00\% | 6.50\% | 6.50\% | 6.50\% | 6.50\% |  |
| Water User Charges | \$ 6,725,229 | \$ 5,849,674 | \$6,385,407 | \$ 6,929,329 | \$ 7,432,391 | \$ 7,915,497 | \$ 8,430,004 | Based on FY20 billing; FY20-23 adj. for pandemic, + rate increases here |
| Water Liens on User Charges |  | 277,965 | 207,383 | 416,807 | 351,565 | 316,408 | 316,408 | Five-year average from FY16-FY20; assume level; FY21-23 adj. for pandemic |
| Interest on User Charges | - | 23,107 | 26,784 | 26,784 | 26,784 | 26,784 | 26,784 | Five-year average from FY16-FY20; assume level |
| Penalty on User Charges | - | 7,436 | 13,465 | 13,465 | 13,465 | 13,465 | 13,465 | Five-year average from FY16-FY20; assume level |
| Non-User Charges Fees | - | 84,043 | 31,183 | 31,183 | 31,183 | 31,183 | 31,183 | Five-year average from FY15-FY19, in case \$50k connection here; assume level |
| Miscellaneous Charges | - | 14,412 | 13,145 | 13,145 | 13,145 | 13,145 | 13,145 | Five-year average from FY16-FY20; assume level |
| Water Liens on Fees | - | 90 | 3,420 | 3,420 | 3,420 | 3,420 | 3,420 | Five-year average from FY16-FY20; assume level |
| Water Liens on Interest | - | 31,431 | 32,191 | 32,191 | 32,191 | 32,191 | 32,191 | Five-year average from FY16-FY20; assume level |
| Total Revenues | \$ 6,725,229 | \$ 6,288,157 | \$ 6,712,976 | \$ 7,466,323 | \$ 7,904,143 | \$ 8,352,092 | \$ 8,866,599 |  |
|  |  |  |  |  |  |  |  |  |
| Available Funds |  |  |  |  |  |  |  |  |
| Prior Year Carryover | \$ 47,441 | \$ | \$ 67,275 | \$ | \$ | \$ | \$ | Funding source, reserved at end of prior year, for encumbrances |
| Retained Earnings Appropriated | - | - |  |  | - | - | - | Retained Earnings used to balance the budget |
| Total Revenues / Available Funds | \$ 6,772,670 | \$ 6,288,157 | \$6,780,251 | \$ 7,466,323 | \$ 7,904,143 | \$ 8,352,092 | \$ 8,866,599 |  |
|  |  |  |  |  |  |  |  |  |
| Expenditures |  |  |  |  |  |  |  |  |
| Salaries | \$ 338,518 | \$ 337,275 | \$ 360,947 | \$ 369,971 | \$ 379,220 | \$ 388,700 | \$ 398,418 | FY21 number is from Budget; $2.5 \%$ increase yearly |
| MWRA Assessment | 4,221,837 | 4,220,394 | 4,465,635 | 4,975,454 | 4,848,626 | 5,052,268 | 5,264,463 | FY21 number budgeted; FY22 projected; FY23 on typical 4.2\% increase |
| Other Expenses | 645,595 | 462,480 | 730,575 | 676,566 | 690,097 | 703,899 | 717,977 | FY21 number is from Budget, incl. FY20 encumbrances; 2\% increase yearly |
| Capital Outlay | 116,496 | 26,496 | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | FY21 number is from Budget; budget number carried forward |
| Existing Debt Service | 796,313 | 796,312 | 1,202,949 | 1,160,200 | 1,059,475 | 951,975 | 867,760 | FY20 and FY21 numbers are from budgets; Rest from "Existing Debt Service" tab |
| New Debt Service | - | - | - | - | 211,000 | 330,775 | 367,300 | See "New Debt Service" tab; Debt projections based on capital plan |
| Short Term Debt | 30,000 | 1,347 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | FY21 number is from Budget; budget number carried forward |
| Indirect Costs | 580,799 | 580,799 | 654,440 | 670,801 | 687,571 | 704,760 | 722,379 | FY21 from Budget; increase 2.5\% yearly |
| Funding of OPEB | 43,112 | 43,112 | 40,770 | 41,789 | 42,834 | 43,905 | 45,002 | FY21 number is from Budget; $2.5 \%$ increase yearly |
| Total Expenditures | \$ 6,772,670 | \$ 6,468,216 | \$ 7,560,316 | \$ 7,999,781 | \$ 8,023,823 | \$ 8,281,282 | \$ 8,488,300 |  |
|  |  |  |  |  |  |  |  |  |
| Excess (Deficit) of Revenues and |  |  |  |  |  |  |  |  |
| Available Funds > Expenditures | \$ | \$ (180,059) | \$ $(780,065)$ | \$ (533,458) | \$ (119,680) | \$ 70,810 | \$ 378,299 |  |
|  |  |  |  |  |  |  |  |  |
| Retained Earnings Projections |  |  |  |  |  |  |  |  |
| Certified Retained Earnings July 1, 2020 |  | \$ 1,755,213 |  |  |  |  |  |  |
| Retained Earnings at Start of the FY Listed |  |  | \$ 1,755,213 | \$ 975,149 | \$ 441,691 | \$ 322,012 | \$ 392,821 |  |
| Surplus/(Deficit) Current FY |  |  | \$ $(780,065)$ | \$ $(533,458)$ | \$ (119,680) | \$ 70,810 | \$ 378,299 |  |
| Projected Retained Earnings at End of FY |  |  | \$ 975,149 | \$ 441,691 | \$ 322,012 | \$ 392,821 | \$ 771,121 |  |
| Retained Earnings as \% of Oper. Budget |  | 27.1\% | 12.9\% | 5.5\% | 4.0\% | 4.7\% | 9.1\% |  |

## WATER ENTERPRISE FUND

## OPTION 4-2.5\% INCREASE FISCAL YEAR 2021

| Target Retained Earnings as \% of Budget: | $10.0 \%$ |
| :--- | :--- |


| Baseline | PROJECTED | PROJECTED | PROJECTED | $\begin{gathered} 2024 \\ \text { PROJECTED } \end{gathered}$ | PROJECTED |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Surplus/Deficit | $(966,047)$ | \$ (1,145,882) | \$ (1,190,093) | $(1,482,710)$ | $(1,689,727)$ |
| Projected Retained Earnings | 789,166 | $(356,715)$ | \$ (1,546,809) | $(3,029,519)$ | (4,719,246) |
| RE as \% of Budget | 10.4\% | -4.5\% | -19.3\% | -36.6\% | -55.6\% |
| Target RE as \% of Budget | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |

Retained Earnings Projections - Baseline Scenario


| Rate Increases: | 2.50\% | 7.00\% | 7.00\% | 6.00\% | 6.00\% |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Rate Impact | 2021 <br> PROJECTED | 2022 <br> PROJECTED | 2023 <br> PROJECTED | 2024 PROJECTED | 2025 <br> PROJECTED |
|  |  |  |  |  |  |
| Surplus/Deficit | \$ (811,062) | \$ $(534,721)$ | \$ (86,147) | \$ 69,192 | \$ 337,007 |
| Projected Retained Earnings | \$ 944,152 | \$ 409,431 | \$ 323,283 | \$ 392,475 | \$ 729,483 |
| RE \% of Budget | 12.5\% | 5.1\% | 4.0\% | 4.7\% | 8.6\% |
| Target RE \% of Budget | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |


| 14.0\% | Retained Earnings Projections - with Rate Changes |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| 12.0\% | $\checkmark$ |  |  |  |  |
| 10.0\% |  |  |  |  |  |
| 8.0\% |  |  |  |  |  |
| 6.0\% |  |  |  |  |  |
| 4.0\% |  |  |  |  |  |
| 2.0\% |  |  |  |  |  |
| 0.0\% |  |  |  |  |  |
|  | 2021 | 2022 | 2023 | 2024 |  |
|  |  | RE \% | -Tar | udget |  |


| User Impact (per Bill) - Water Bills Only |  |  | New Bills |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| User Type | Usage | Current Bill | FY21 | FY22 | FY23 | FY24 | FY25 |
| Tier 1 User | 2,000 | \$ 92.70 | \$ 95.02 | \$ 101.67 | \$ 108.79 | \$ 115.31 | \$ 122.23 |
| Tier 2 User | 3,000 | \$ 142.10 | \$ 145.65 | \$ 155.85 | \$ 166.76 | \$ 176.76 | \$ 187.37 |
| Average Residential User | 4,234 | \$ 223.67 | \$ 229.26 | \$ 245.31 | \$ 262.48 | \$ 278.23 | \$ 294.92 |
| Avg. Res. User (for pres.) | 4,362 | \$ 232.13 | \$ 237.93 | \$ 254.59 | \$ 272.41 | \$ 288.75 | \$ 306.08 |
| Tier 3 User | 6,000 | \$ 340.40 | \$ 348.91 | \$ 373.33 | \$ $\quad 399.47$ | \$ 423.44 | \$ 448.84 |
| Tier 4 User | 10,000 | \$ 670.80 | \$ 687.57 | \$ 735.70 | \$ 787.20 | \$ 834.43 | \$ 884.50 |
| Tier 5 User | 20,000 | \$ 1,591.80 | \$ 1,631.60 | \$ 1,745.81 | \$ 1,868.01 | \$ 1,980.09 | \$ 2,098.90 |
| Avg. Com. User (for pres.) | 24,527 | \$ 2,059.44 | \$ 2,110.93 | \$ 2,258.69 | \$ 2,416.80 | \$ 2,561.81 | \$ 2,715.51 |
| Tier 6 User | 50,000 | \$ 4,690.80 | \$ 4,808.07 | \$ 5,144.63 | \$ 5,504.76 | \$ 5,835.04 | \$ 6,185.15 |
| Tier 7 User | 100,000 | \$ 10,250.80 | \$ 10,507.07 | \$ 11,242.56 | \$ 12,029.54 | \$ 12,751.32 | \$ 13,516.40 |
| Tier 8 User | 200,000 | \$ 21,690.80 | \$ 22,233.07 | \$ 23,789.38 | \$ 25,454.64 | \$ 26,981.92 | \$ 28,600.84 |

Usage in cubic feet
The average residential user was determined using this formula
2.67 people per household x 65 gallons per day per person $=173.55$ gallons per household per day

One half of the year: 365 days $/ 2=182.5$
$173.55 \times 182.5=31,672.875$ gallons per household per half year
$31,672.875$ gallons $=4,234.0475$ cubic feet per half year
Note that median residential usage in 2015 billing data was 3,424 .
2015 was a dry year and outdoor water usage may have been high.

| WATER ENTERPRISE FUND |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OPTION 4-2.5\% INCREASE FISCAL YEAR 2021 |  |  |  |  |  |  |  |  |
|  | Budgeted | Actual | Projected | Projected | Projected | Projected | Projected |  |
| Description | FY 2020 | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 | Comments |
| Revenues |  |  | 2.50\% | 7.00\% | 7.00\% | 6.00\% | 6.00\% |  |
| Water User Charges | \$ 6,725,229 | \$ 5,849,674 | \$6,354,409 | \$ 6,928,065 | \$ 7,465,924 | \$ 7,913,879 | \$ 8,388,712 | Based on FY20 billing; FY20-23 adj. for pandemic, + rate increases here |
| Water Liens on User Charges | - | 277,965 | 207,383 | 416,807 | 351,565 | 316,408 | 316,408 | Five-year average from FY16-FY20; assume level; FY21-23 adj. for pandemic |
| Interest on User Charges | - | 23,107 | 26,784 | 26,784 | 26,784 | 26,784 | 26,784 | Five-year average from FY16-FY20; assume level |
| Penalty on User Charges | - | 7,436 | 13,465 | 13,465 | 13,465 | 13,465 | 13,465 | Five-year average from FY16-FY20; assume level |
| Non-User Charges Fees | - | 84,043 | 31,183 | 31,183 | 31,183 | 31,183 | 31,183 | Five-year average from FY15-FY19, in case \$50k connection here; assume level |
| Miscellaneous Charges | - | 14,412 | 13,145 | 13,145 | 13,145 | 13,145 | 13,145 | Five-year average from FY16-FY20; assume level |
| Water Liens on Fees | - | 90 | 3,420 | 3,420 | 3,420 | 3,420 | 3,420 | Five-year average from FY16-FY20; assume level |
| Water Liens on Interest | - ${ }^{-}$ | 31,431 | 32,191 | 32,191 | 32,191 | 32,191 | 32,191 | Five-year average from FY16-FY20; assume level |
| Total Revenues | \$ 6,725,229 | \$ 6,288,157 | \$ 6,681,979 | \$ 7,465,060 | \$ 7,937,675 | \$ 8,350,474 | \$ 8,825,307 |  |
| Available Funds |  |  |  |  |  |  |  |  |
| Prior Year Carryover | \$ 47,441 | \$ | \$ 67,275 | \$ | \$ | \$ | \$ | Funding source, reserved at end of prior year, for encumbrances |
| Retained Earnings Appropriated | - | - | - | - | - | - | - | Retained Earnings used to balance the budget |
| Total Revenues / Available Funds | \$ 6,772,670 | \$ 6,288,157 | \$6,749,254 | \$ 7,465,060 | \$ 7,937,675 | \$ 8,350,474 | \$ 8,825,307 |  |
| Expenditures |  |  |  |  |  |  |  |  |
| Salaries | \$ 338,518 | \$ 337,275 | \$ 360,947 | \$ 369,971 | \$ 379,220 | \$ 388,700 | \$ 398,418 | FY21 number is from Budget; $2.5 \%$ increase yearly |
| MWRA Assessment | 4,221,837 | 4,220,394 | 4,465,635 | 4,975,454 | 4,848,626 | 5,052,268 | 5,264,463 | FY21 number budgeted; FY22 projected; FY23 on typical 4.2\% increase |
| Other Expenses | 645,595 | 462,480 | 730,575 | 676,566 | 690,097 | 703,899 | 717,977 | FY21 number is from Budget, incl. FY20 encumbrances; $2 \%$ increase yearly |
| Capital Outlay | 116,496 | 26,496 | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | FY21 number is from Budget; budget number carried forward |
| Existing Debt Service | 796,313 | 796,312 | 1,202,949 | 1,160,200 | 1,059,475 | 951,975 | 867,760 | FY20 and FY21 numbers are from budgets; Rest from "Existing Debt Service" tab |
| New Debt Service | - | - | - | - | 211,000 | 330,775 | 367,300 | See "New Debt Service" tab; Debt projections based on capital plan |
| Short Term Debt | 30,000 | 1,347 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | FY21 number is from Budget; budget number carried forward |
| Indirect Costs | 580,799 | 580,799 | 654,440 | 670,801 | 687,571 | 704,760 | 722,379 | FY21 from Budget; increase 2.5\% yearly |
| Funding of OPEB | 43,112 | 43,112 | 40,770 | 41,789 | 42,834 | 43,905 | 45,002 | FY21 number is from Budget; $2.5 \%$ increase yearly |
| Total Expenditures | \$ 6,772,670 | \$ 6,468,216 | \$7,560,316 | \$ 7,999,781 | \$ 8,023,823 | \$ 8,281,282 | \$ 8,488,300 |  |
| Excess (Deficit) of Revenues and |  |  |  |  |  |  |  |  |
| Available Funds > Expenditures | \$ | \$ (180,059) | \$ $(811,062)$ | \$ (534,721) | \$ (86,147) | \$ 69,192 | \$ 337,007 |  |
| Retained Earnings Projections |  |  |  |  |  |  |  |  |
| Certified Retained Earnings July 1, 2020 |  | \$ 1,755,213 |  |  |  |  |  |  |
| Retained Earnings at Start of the FY Listed |  |  | \$ 1,755,213 | \$ 944,152 | \$ 409,431 | \$ 323,283 | \$ 392,475 |  |
| Surplus/(Deficit) Current FY |  |  | \$ $(811,062)$ | \$ $(534,721)$ | \$ $(86,147)$ | \$ 69,192 | \$ 337,007 |  |
| Projected Retained Earnings at End of FY |  |  | \$ 944,152 | \$ 409,431 | \$ 323,283 | \$ 392,475 | \$ 729,483 |  |
| Retained Earnings as \% of Oper. Budget |  | 27.1\% | 12.5\% | 5.1\% | 4.0\% | 4.7\% | 8.6\% |  |

## WATER ENTERPRISE FUND

 OPTION 5-2\% INCREASE FISCAL YEAR 2021| Target Retained Earnings as \% of Budget: | 10.0 |
| :--- | :--- |


| Baseline | PROJECTED | PROJECTED | PROJECTED | $\begin{gathered} 2024 \\ \text { PROJECTED } \end{gathered}$ | PROJECTED |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Surplus/Deficit | $(966,047)$ | \$ (1,145,882) | \$ (1,190,093) | $(1,482,710)$ | $(1,689,727)$ |
| Projected Retained Earnings | 789,166 | $(356,715)$ | \$ (1,546,809) | $(3,029,519)$ | (4,719,246) |
| RE as \% of Budget | 10.4\% | -4.5\% | -19.3\% | -36.6\% | -55.6\% |
| Target RE as \% of Budget | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |

Retained Earnings Projections - Baseline Scenario


| Rate Increases: | 2.00\% | 7.00\% | 7.00\% | 7.00\% | 7.00\% |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Rate Impact | $2021$ <br> PROJECTED | $2022$ <br> PROJECTED | $2023$ <br> PROJECTED | 2024 <br> PROJECTED | $2025$ <br> PROJECTED |
|  |  |  |  |  |  |
| Surplus/Deficit | \$ $(842,059)$ | \$ $(568,516)$ | \$ $(122,566)$ | \$ 104,883 | \$ 454,335 |
| Projected Retained Earnings | \$ 913,155 | \$ 344,638 | \$ 222,072 | \$ 326,954 | \$ 781,290 |
| RE \% of Budget | 12.1\% | 4.3\% | 2.8\% | 3.9\% | 9.2\% |
| Target RE \% of Budget | 10.0\% | 10.0\% | 10.0\% | 10.0\% | 10.0\% |

Retained Earnings Projections - with Rate Changes

| 14.0\% |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 12.0 \% \\ & 10.0 \% \end{aligned}$ |  |  |  |  |  |
|  |  |  |  |  |  |
| 8.0\% |  |  |  |  |  |
| 6.0\% |  |  |  |  |  |
| 4.0\% |  |  |  |  |  |
| 2.0\% |  |  |  |  |  |
| 0.0\% |  |  |  |  |  |
|  | 2021 | 2022 | 2023 | 2024 | 2025 |
|  |  | RE \% | -Ta | udget |  |


| User Impact (per Bill) - Water Bills Only |  |  | New Bills |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| User Type | Usage | Current Bill | FY21 | FY22 | FY23 | FY24 | FY25 |
| Tier 1 User | 2,000 | \$ 92.70 | \$ 94.55 | \$ 101.17 | \$ 108.25 | \$ 115.83 | \$ 123.94 |
| Tier 2 User | 3,000 | \$ 142.10 | \$ 144.94 | \$ 155.09 | \$ $\quad 165.94$ | \$ 177.56 | \$ 189.99 |
| Average Residential User | 4,234 | \$ 223.67 | \$ 228.14 | \$ 244.11 | \$ 261.20 | \$ 279.48 | \$ 299.05 |
| Avg. Res. User (for pres.) | 4,362 | \$ 232.13 | \$ 236.77 | \$ 253.34 | \$ 271.08 | \$ 290.05 | \$ 310.36 |
| Tier 3 User | 6,000 | \$ 340.40 | \$ 347.21 | \$ 371.51 | \$ $\quad 397.52$ | \$ 425.34 | \$ 455.12 |
| Tier 4 User | 10,000 | \$ 670.80 | \$ 684.22 | \$ 732.11 | \$ 783.36 | \$ 838.19 | \$ 896.87 |
| Tier 5 User | 20,000 | \$ 1,591.80 | \$ 1,623.64 | \$ 1,737.29 | \$ 1,858.90 | \$ 1,989.02 | \$ 2,128.26 |
| Avg. Com. User (for pres.) | 24,527 | \$ 2,059.44 | \$ 2,100.63 | \$ 2,247.67 | \$ 2,405.01 | \$ 2,573.36 | \$ 2,753.49 |
| Tier 6 User | 50,000 | \$ 4,690.80 | \$ 4,784.62 | \$ 5,119.54 | \$ 5,477.91 | \$ 5,861.36 | \$ 6,271.66 |
| Tier 7 User | 100,000 | \$ 10,250.80 | \$ 10,455.82 | \$ 11,187.72 | \$ 11,970.86 | \$ 12,808.82 | \$ 13,705.44 |
| Tier 8 User | 200,000 | \$ 21,690.80 | \$ 22,124.62 | \$ 23,673.34 | \$ 25,330.47 | \$ 27,103.61 | \$ 29,000.86 |

The average residential user was determined using this formula
2.67 people per household $x 65$ gallons per day per person $=173.55$ gallons per household per day

One half of the year: 365 days $/ 2=182.5$
$173.55 \times 182.5=31,672.875$ gallons per household per half year
$31,672.875$ gallons $=4,234.0475$ cubic feet per half year
Note that median residential usage in 2015 billing data was 3,424 .
2015 was a dry year and outdoor water usage may have been high.

| WATER ENTERPRISE FUND |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OPTION 5-2\% INCREASE FISCAL YEAR 2021 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | Budgeted | Actual | Projected | Projected | Projected | Projected | Projected |  |
| Description | FY 2020 | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 | Comments |
| Revenues |  |  | 2.00\% | 7.00\% | 7.00\% | 7.00\% | 7.00\% |  |
| Water User Charges | \$ 6,725,229 | \$ 5,849,674 | \$ 6,323,412 | \$ 6,894,270 | \$ 7,429,504 | \$ 7,949,570 | \$ 8,506,040 | Based on FY20 billing; FY20-23 adj. for pandemic, + rate increases here |
| Water Liens on User Charges |  | 277,965 | 207,383 | 416,807 | 351,565 | 316,408 | 316,408 | Five-year average from FY16-FY20; assume level; FY21-23 adj. for pandemic |
| Interest on User Charges | - | 23,107 | 26,784 | 26,784 | 26,784 | 26,784 | 26,784 | Five-year average from FY16-FY20; assume level |
| Penalty on User Charges | - | 7,436 | 13,465 | 13,465 | 13,465 | 13,465 | 13,465 | Five-year average from FY16-FY20; assume level |
| Non-User Charges Fees | - | 84,043 | 31,183 | 31,183 | 31,183 | 31,183 | 31,183 | Five-year average from FY15-FY19, in case \$50k connection here; assume level |
| Miscellaneous Charges | - | 14,412 | 13,145 | 13,145 | 13,145 | 13,145 | 13,145 | Five-year average from FY16-FY20; assume level |
| Water Liens on Fees | - | 90 | 3,420 | 3,420 | 3,420 | 3,420 | 3,420 | Five-year average from FY16-FY20; assume level |
| Water Liens on Interest | - | 31,431 | 32,191 | 32,191 | 32,191 | 32,191 | 32,191 | Five-year average from FY16-FY20; assume level |
| Total Revenues | \$ 6,725,229 | \$ 6,288,157 | \$ 6,650,982 | \$ 7,431,264 | \$ 7,901,256 | \$ 8,386,165 | \$ 8,942,635 |  |
|  |  |  |  |  |  |  |  |  |
| Available Funds |  |  |  |  |  |  |  |  |
| Prior Year Carryover | \$ 47,441 | \$ | \$ 67,275 | \$ | \$ | \$ | \$ | Funding source, reserved at end of prior year, for encumbrances |
| Retained Earnings Appropriated | - | - |  |  |  | - | - | Retained Earnings used to balance the budget |
| Total Revenues / Available Funds | \$ 6,772,670 | \$ 6,288,157 | \$6,718,257 | \$ 7,431,264 | \$ 7,901,256 | \$ 8,386,165 | \$ 8,942,635 |  |
|  |  |  |  |  |  |  |  |  |
| Expenditures |  |  |  |  |  |  |  |  |
| Salaries | \$ 338,518 | \$ 337,275 | \$ 360,947 | \$ 369,971 | \$ 379,220 | \$ 388,700 | \$ 398,418 | FY21 number is from Budget; $2.5 \%$ increase yearly |
| MWRA Assessment | 4,221,837 | 4,220,394 | 4,465,635 | 4,975,454 | 4,848,626 | 5,052,268 | 5,264,463 | FY21 number budgeted; FY22 projected; FY23 on typical 4.2\% increase |
| Other Expenses | 645,595 | 462,480 | 730,575 | 676,566 | 690,097 | 703,899 | 717,977 | FY21 number is from Budget, incl. FY20 encumbrances; 2\% increase yearly |
| Capital Outlay | 116,496 | 26,496 | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | FY21 number is from Budget; budget number carried forward |
| Existing Debt Service | 796,313 | 796,312 | 1,202,949 | 1,160,200 | 1,059,475 | 951,975 | 867,760 | FY20 and FY21 numbers are from budgets; Rest from "Existing Debt Service" tab |
| New Debt Service | - | - | - | - | 211,000 | 330,775 | 367,300 | See "New Debt Service" tab; Debt projections based on capital plan |
| Short Term Debt | 30,000 | 1,347 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | FY21 number is from Budget; budget number carried forward |
| Indirect Costs | 580,799 | 580,799 | 654,440 | 670,801 | 687,571 | 704,760 | 722,379 | FY21 from Budget; increase 2.5\% yearly |
| Funding of OPEB | 43,112 | 43,112 | 40,770 | 41,789 | 42,834 | 43,905 | 45,002 | FY21 number is from Budget; $2.5 \%$ increase yearly |
| Total Expenditures | \$ 6,772,670 | \$ 6,468,216 | \$ 7,560,316 | \$ 7,999,781 | \$ 8,023,823 | \$ 8,281,282 | \$ 8,488,300 |  |
| Excess (Deficit) of Revenues and |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Available Funds > Expenditures | \$ | \$ (180,059) | \$ $(842,059)$ | \$ (568,516) | \$ (122,566) | \$ 104,883 | \$ 454,335 |  |
|  |  |  |  |  |  |  |  |  |
| Retained Earnings Projections |  |  |  |  |  |  |  |  |
| Certified Retained Earnings July 1, 2020 |  | \$ 1,755,213 |  |  |  |  |  |  |
| Retained Earnings at Start of the FY Listed |  |  | \$ 1,755,213 | \$ 913,155 | \$ 344,638 | \$ 222,072 | \$ 326,954 |  |
| Surplus/(Deficit) Current FY |  |  | \$ $(842,059)$ | \$ $(568,516)$ | \$ $(122,566)$ | \$ 104,883 | \$ 454,335 |  |
| Projected Retained Earnings at End of FY |  |  | \$ 913,155 | \$ 344,638 | \$ 222,072 | \$ 326,954 | \$ 781,290 |  |
| Retained Earnings as \% of Oper. Budget |  | 27.1\% | 12.1\% | 4.3\% | 2.8\% | 3.9\% | 9.2\% |  |

# Town of Saugus FY2021 Water Rates Update 

The Abrahams Group
November 2020

## Five-Year Look Back

The following rate changes were implemented recently:

|  | FY 2016 | FY 2017 | FY 2018 | FY 2019 | FY 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Recommended | N/A | $9.5 \%$ | $2.5 \%$ | $3.0 \%$ | $1.5 \%$ |
| Voted | $3.0 \%$ | $9.5 \%$ | $2.5 \%$ | $3.0 \%$ | $1.5 \%$ |

The following graphs show recent financial results:



## FY20 in Review

FY20 was impacted in the following ways:

- Billings lower due to lower consumption due to wetter-than-normal weather patterns
- People's ability to pay impacted by pandemic; $87.6 \%$ of second billing paid before demands
- No Retained Earnings used to balance the budget
- \$237k in expenditure turnbacks, \$67k in encumbrances
- Financial results:

|  | Budget | Actuals |
| :--- | :---: | :---: |
| Total Revenues/OFS | $\$ 6,772,670$ | $\$ 6,288,157$ |
| Total Expenditures/OFU | $\$ 6,772,670$ | $\$ 6,468,216$ |
| Surplus/(Deficit) | $\$ 0$ | $\$(180,059)$ |

## FY20 in Review (Cont.)

|  | Recommended 1.5\% <br> Proj. FY20 | Voted 1.5\% <br> Proj. FY20 | Voted 1.5\% <br> Actual 2020 |
| :--- | :---: | :---: | :---: |
| Revenues | $\$ 6,923,521$ | $\$ 6,923,521$ | $\$ 6,288,157$ |
| Retained Earnings Appropriated | $\mathbf{\$ 0}$ | $\mathbf{\$ 0}$ | $\mathbf{\$ 0}$ |
| Total Revenues and Available Funds | $\mathbf{\$ 6 , 9 2 3 , 5 2 1}$ | $\mathbf{\$ 6 , 9 2 3 , 5 2 1}$ | $\mathbf{\$ 6 , 2 8 8 , 1 5 7}$ |
| Total Expenditures | $\mathbf{\$ 6 , 7 2 5 , 2 2 7}$ | $\mathbf{\$ 6 , 7 2 5 , 2 2 7}$ | $\mathbf{\$ 6 , 4 6 8 , 2 1 6}$ |
| Surplus/(Deficit) | $\mathbf{\$ 1 9 8 , 2 9 4}$ | $\mathbf{\$ 1 9 8 , 2 9 4}$ | $\mathbf{\$ ( 1 8 0 , 0 5 9 )}$ |
|  |  |  |  |
| Retained Earnings Projections |  |  |  |
| Retained Earnings at Start of FY20 | $\mathbf{\$ 1 , 8 4 4 , 0 8 2}$ | $\mathbf{\$ 1 , 8 4 4 , 0 8 2}$ | $\mathbf{\$ 1 , 9 4 3 , 9 2 6}$ |
| Retained Earnings Appropriated | $\mathbf{\$ 0}$ | $\mathbf{\$ 0}$ | $\mathbf{\$ 0}$ |
| Surplus/(Deficit) for FY20 | $\mathbf{\$ 1 9 8 , 2 9 4}$ | $\mathbf{\$ 1 9 8 , 2 9 4}$ | $\mathbf{\$ ( 1 8 0 , 0 5 9 )}$ |
| Retained Earnings at End of FY20 | $\mathbf{\$ 2 , 0 4 2 , 3 7 6}$ | $\mathbf{\$ 2 , 0 4 2 , 3 7 6}$ | $\mathbf{\$ 1 , 7 5 5 , 2 1 3}$ |
| Retained Earnings as \% of Budget | $\mathbf{3 0 . 4 \%}$ | $\mathbf{3 0 . 4 \%}$ | $\mathbf{2 7 . 1 \%}$ |

## Rate Study Objectives

The Town would like to develop a five-year rate plan that would:

- Target projected retained earnings balance of $10 \%$ to $15 \%$ of operating budget.
- Eliminate shortfalls, which require retained earnings to balance the operating budget.
- Fund capital plan for infrastructure and equipment.


## Capital Plan

The following projects and items are part of Town's fiveyear capital plan, to be funded through future bond authorization.

- \$50k for new mini-excavator in FY2022
- Conventionally borrowed at 4.5\% interest
- $\$ 2.375 \mathrm{~m}$ for water meter replacement program and engineering in FY2022/FY2023
- To be financed through 10-year, 0\% interest MWRA loan
- $\$ 1.2 \mathrm{~m}$ for water main replacements in FY2023
- To be financed through 10-year, 0\% interest MWRA Ioan
- $\$ 150 \mathrm{k}$ for replacement of dump truck in FY2024
- Conventionally borrowed at $4.5 \%$ interest


## Rate-Setting Drivers

- Projected expenses \% changes are shown here:

|  | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Salaries | $6.6 \%$ | $2.5 \%$ | $2.5 \%$ | $2.5 \%$ | $2.5 \%$ |
| Debt | $47.4 \%$ | $-3.5 \%$ | $9.4 \%$ | $1.0 \%$ | $-3.7 \%$ |
| Other Expenses | $5.5 \%$ | 9.1\% | $-1.5 \%$ | $3.7 \%$ | $3.7 \%$ |
| Total Expenses | $\mathbf{1 0 . 6 \%}$ | $\mathbf{6 . 8 \%}$ | $\mathbf{0 . 3 \%}$ | $\mathbf{3 . 2 \%}$ | $\mathbf{2 . 5 \%}$ |

- Notable Impacts:
- Salaries in FY21 impacted by new contractual obligations and one-time sick leave buyback obligation on new retiree
- Debt increases $\$ 392 k$ from FY20 to FY21, \$110k from FY22 to FY23 when new debt to fund capital plan starts
- MWRA assessment increases \$245k from FY20 to FY21 and a projected $\$ 510$ k from FY21 to FY22


## Where Are We Now?

|  | Projected | Projected | Projected | Projected | Projected |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Description | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 |
| Total Revenues and OFS | \$ 6,594,269 | 6,853,899 | 6,833,729 | 6,798,573 | \$ 6,798,573 |
| Total Expenditures and OFU | \$ 7,560,316 | \$ 7,999,781 | 8,023,823 | 8,281,282 | \$ 8,488,300 |
| Excess/(Deficiency) | \$ $(\mathbf{9 6 6 , 0 4 7 )}$ | \$ (1,145,882) | \$ (1,190,093) | \$ (1,482,710) | \$ (1,689,727) |
| Retained Earnings Summary |  |  |  |  |  |
| RE at start of FY | \$ 1,755,213 | \$ 789,166 | \$ (356,716) | \$ $(1,546,809)$ | \$ $(3,029,519)$ |
| Current Year Surplus (Deficit) | \$ $(966,047)$ | \$ (1,145,882) | \$ (1,190,093) | \$ $(1,482,710)$ | \$ $(1,689,727)$ |
| Projected Retained Earnings Balance | \$ 789,166 | \$ $(356,716)$ | \$ (1,546,809) | \$ $(3,029,519)$ | \$ (4,719,246) |
| Retained Earnings \% of Expenditures | 10.4\% | -4.5\% | -19.3\% | -36.6\% | -55.6\% |

- Revenues shown with no rate change
- Consumption and collections impacted by pandemic through FY23, when recovery expected
- Funds to supplement FY21 budget, if no significant rate action for FY21
- Retained Earnings certified recently at $\$ 1.755$ million and can cover FY21's shortfall, but not FY22's, if no rate action
- Rate action necessary to avoid depleting retained earnings and to avoid shortfalls



## Rate Option 1 - 5\% Increase FY21

Five-Year Rate Plan

| FY 2021 | $5.0 \%$ |
| :---: | :---: |
| FY 2022 | $6.0 \%$ |
| FY 2023 | $6.0 \%$ |
| FY 2024 | $5.0 \%$ |
| FY 2025 | $5.0 \%$ |

Retained Earnings Projections - with Rate Changes


| User Impact | $\begin{gathered} \text { Usage / } \\ \text { Bill } \end{gathered}$ | $\begin{gathered} \hline \text { FY20 } \\ \text { Bill } \\ \hline \end{gathered}$ | FY21 |  | FY22 |  | FY23 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| User Example |  |  | Bill | Diff \$ | Bill | Diff \$ | Bill | Diff \$ |
| Tier 1 User | 2,000 | \$ 93 | \$ 97 | \$ 5 | \$ 103 | \$ 6 | \$ 109 | \$ 6 |
| Tier 2 User | 3,000 | \$ 142 | \$ 149 | \$ 7 | \$ 158 | \$ 9 | \$ 168 | \$ 9 |
| Avg. Residential User | 4,362 | \$ 232 | \$ 244 | \$ 12 | \$ 258 | \$ 15 | \$ 274 | \$ 16 |
| Avg. Commercial User | 24,527 | \$2,059 | \$ 2,162 | \$ 103 | \$ 2,292 | \$ 130 | \$ 2,430 | \$ 138 |
| User Impact | Usage | FY20 |  |  | FY |  | FY25 | 20 |
| User Example | Bill | Bill | Bill | Diff \$ | Bill | Diff \$ | Bill | Diff \$ |
| Tier 1 User | 2,000 | \$ 93 | \$ 115 | \$ 5 | \$ 121 | \$ 6 | \$ 121 | \$ 28 |
| Tier 2 User | 3,000 | \$ 142 | \$ 176 | \$ 8 | \$ 185 | \$ 9 | \$ 185 | \$ 43 |
| Avg. Residential User | 4,362 | \$ 232 | \$ 288 | \$ 14 | \$ 302 | \$ 14 | \$ 302 | \$ 70 |
| Avg. Commercial User | 24,527 | \$2,059 | \$ 2,551 | \$ 121 | \$ 2,679 | \$ 128 | \$ 2,679 | \$ 619 |

## Rate Option 2 - 4\% Increase FY21

| Five-Year Rate Plan |  |  | Retained Earnings Projections - with Rate Changes |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FY 2021 | 4.0\% |  |  |  |  |  |  |  |
| FY 2022 | 6.0\% |  |  |  |  |  |  |  |
| FY 2023 | 6.0\% |  |  |  |  |  |  |  |
| FY 2024 | 6.0\% |  | 2021 |  |  |  |  |  |
| FY 2025 | 6.0\% |  |  | -RE\% | Budget | get RE\% of |  |  |
| User Impact | Usage / | FY20 |  |  | FY2 |  | FY2 |  |
| User Example | Bill | Bill | Bill | Diff \$ | Bill | Diff \$ | Bill | Diff \$ |
| Tier 1 User | 2,000 | \$ 93 | \$ 96 | \$ 4 | \$ 102 | \$ 6 | \$ 108 | \$ 6 |
| Tier 2 User | 3,000 | \$ 142 | \$ 148 | \$ 6 | \$ 157 | \$ 9 | \$ 166 | \$ 9 |
| Avg. Residential User | 4,362 | \$ 232 | \$ 241 | \$ 9 | \$ 256 | \$ 14 | \$ 271 | \$ 15 |
| Avg. Commercial User | 24,527 | \$2,059 | \$ 2,142 | \$ 82 | \$ 2,270 | \$ 129 | \$ 2,407 | \$ 136 |
| User Impact | Usage / | FY20 |  |  | FY2 |  | FY25/ | Y20 |
| User Example | Bill | Bill | Bill | Diff \$ | Bill | Diff \$ | Bill | Diff \$ |
| Tier 1 User | 2,000 | \$ 93 | \$ 115 | \$ 6 | \$ 122 | \$ 7 | \$ 122 | \$ 29 |
| Tier 2 User | 3,000 | \$ 142 | \$ 176 | \$ 10 | \$ 187 | \$ 11 | \$ 187 | \$ 44 |
| Avg. Residential User | 4,362 | \$ 232 | \$ 288 | \$ 16 | \$ 305 | \$ 17 | \$ 305 | \$ 73 |
| Avg. Commercial User | 24,527 | \$2,059 | \$ 2,551 | \$ 144 | \$ 2,704 | \$ 153 | \$ 2,704 | \$ 645 |

## Rate Option 3 - 3\% Increase FY21

Five-Year Rate Plan

| FY 2021 | $3.0 \%$ |
| :---: | :---: |
| FY 2022 | $6.5 \%$ |
| FY 2023 | $6.5 \%$ |
| FY 2024 | $6.5 \%$ |
| FY 2025 | $6.5 \%$ |

Retained Earnings Projections - with Rate Changes


| User Impact | Usage / Bill | $\begin{gathered} \text { FY20 } \\ \text { Bill } \\ \hline \end{gathered}$ | FY21 |  | FY22 |  | FY23 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| User Example |  |  | Bill | Diff \$ | Bill | Diff \$ | Bill | Diff \$ |
| Tier 1 User | 2,000 | \$ 93 | \$ 95 | \$ 3 | \$ 102 | \$ 6 | \$ 108 | \$ 7 |
| Tier 2 User | 3,000 | \$ 142 | \$ 146 | \$ 4 | \$ 156 | \$ 10 | \$ 166 | \$ 10 |
| Avg. Residential User | 4,362 | \$ 232 | \$ 239 | \$ 7 | \$ 255 | \$ 16 | \$ 271 | \$ 17 |
| Avg. Commercial User | 24,527 | \$2,059 | \$ 2,121 | \$ 62 | \$ 2,259 | \$ 138 | \$ 2,406 | \$ 147 |
| User Impact | Usage / | FY2 | FY |  | FY |  | FY25 | 20 |
| User Example | Bill | Bill | Bill | Diff \$ | Bill | Diff \$ | Bill | Diff \$ |
| Tier 1 User | 2,000 | \$ 93 | \$ 115 | \$ 7 | \$ 123 | \$ 7 | \$ 123 | \$ 30 |
| Tier 2 User | 3,000 | \$ 142 | \$ 177 | \$ 11 | \$ 188 | \$ 11 | \$ 188 | \$ 46 |
| Avg. Residential User | 4,362 | \$ 232 | \$ 289 | \$ 18 | \$ 308 | \$ 19 | \$ 308 | \$ 75 |
| Avg. Commercial User | 24,527 | \$2,059 | \$ 2,562 | \$ 156 | \$ 2,729 | \$ 167 | \$ 2,729 | \$ 669 |

## Rate Option 4 - 2.5\% Increase FY21

| Five-Year Rate Plan |  |  | Retained Earnings Projections - with Rate Changes |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FY 2021 | 2.5\% |  | $\%$ |  |  |  |  |  |
| FY 2022 | 7.0\% |  |  |  |  |  |  |  |
| FY 2023 | 7.0\% |  |  |  |  |  |  |  |
| FY 2024 | 6.0\% |  | 2021 |  |  | 2024 |  | 025 |
| FY 2025 | 6.0\% |  |  |  | dget | get RE\% of B |  |  |
|  | Usage / <br> Bill | $\begin{gathered} \hline \text { FY20 } \\ \text { Bill } \end{gathered}$ | FY21 |  | FY22 |  | FY23 |  |
| User Example |  |  | Bill | Diff \$ | Bill | Diff \$ | Bill | Diff \$ |
| Tier 1 User | 2,000 | \$ 93 | \$ 95 | \$ 2 | \$ 102 | \$ 7 | \$ 109 | \$ 7 |
| Tier 2 User | 3,000 | \$ 142 | \$ 146 | \$ 4 | \$ 156 | \$ 10 | \$ 167 | \$ 11 |
| Avg. Residential User | 4,362 | \$ 232 | \$ 238 | \$ 6 | \$ 255 | \$ 17 | \$ 272 | \$ 18 |
| Avg. Commercial User | 24,527 | \$2,059 | \$ 2,111 | \$ 51 | \$ 2,259 | \$ 148 | \$ 2,417 | \$ 158 |
| User Impact | Usage / Bill | $\begin{gathered} \hline \text { FY20 } \\ \text { Bill } \\ \hline \end{gathered}$ | FY24 |  | FY25 |  | FY25/FY20 |  |
| User Example |  |  | Bill | Diff \$ | Bill | Diff \$ | Bill | Diff \$ |
| Tier 1 User | 2,000 | \$ 93 | \$ 115 | \$ 7 | \$ 122 | \$ 7 | \$ 122 | \$ 30 |
| Tier 2 User | 3,000 | \$ 142 | \$ 177 | \$ 10 | \$ 187 | \$ 11 | \$ 187 | \$ 45 |
| Avg. Residential User | 4,362 | \$ 232 | \$ 289 | \$ 16 | \$ 306 | \$ 17 | \$ 306 | \$ 74 |
| Avg. Commercial User | 24,527 | \$2,059 | \$ 2,562 | \$ 145 | \$ 2,716 | \$ 154 | \$ 2,716 | \$ 656 |

## Rate Option 5 - 2\% Increase FY21



