



# City of Cambridge

## Executive Department

**LOUIS A. DePASQUALE**  
City Manager

March 21, 2022

To the Honorable, The City Council:

The setting of the Water/Sewer rate occurs each March. As the City continues to be impacted by the COVID-19 pandemic, we have worked hard to provide relief to residents and businesses as well as limit increases in taxes, fees, and rates where possible.

The establishment of the FY23 Water/Sewer rates remains challenging with consumption still lower than pre COVID levels, which impacts water and sewer revenues. We have been able to adjust some expenditures to offset lower revenues projected for FY23 based on FY22 estimates to allow for a modest increase in rates. Operating and capital expenditures have been modified and reduced for FY23 from what was projected in last year's letter. The FY23 Sewer Budget reflects savings resulting from reduced bond issuance and receiving a low interest rate (1.9%) on sewer bonds sold earlier this month. It should be noted that the Sewer Budget is comprised mostly of fixed costs such as debt service and the MWRA assessment, which totals 88% of the total Sewer Budget.

The Water/Sewer bills that will be issued in July will be for the usage period April-June 2022 and will reflect the new sewer rate. The water rate reflects a minimal increase from FY22.

### **RECOMMENDATIONS**

The City administration and City Council continue to recognize the importance of minimizing increases in water and sewer rates. I recommend that the City Council approve a 1.96% increase in the water consumption block rate and an 8.0% increase in the sewer use block rate, resulting in a 6.7% increase in the combined rate for the period beginning April 1, 2022, and ending March 31, 2023. The water rate increase has been consistent for over a decade in which the water rate has increased by a very small percentage or not at all. In last year's recommendation, the projected FY23 rate increases for water, sewer, and combined were 1.98%, 8.0%, and 6.7%, respectively, based on March 2021 consumption rates and projected budgets, which is essentially identical to this year's actual recommended increase.

In March of each year, the City Council establishes water and sewer rates, which determine water and sewer revenues for the next fiscal year. Because of the timing requirements, water and sewer rates are set prior to the adoption of both the Cambridge budget and Massachusetts Water Resources Authority (MWRA) budget; therefore, revenue needs are based upon estimated expenditures. Generally, water and sewer rates have been established so that revenues generated by them, when combined with other related revenue sources, cover projected annual costs.

## **WATER**

Two major factors determine the rate necessary to generate enough revenues: water consumption and the budget. The FY23 Water Operating Budget reflects a small increase from the FY22 Budget primarily due to salary costs and chemical costs.

The planned FY23 capital allocation is \$5,997,000 using pay-as-you-go capital funding based on current revenues. FY23 capital projects consist of significant improvements to our water system including water mains; upgrading the treatment plant's Supervisory Control and Data Acquisition (SCADA) system which is the software and hardware that enables the Operators to operate, control and document the operations of the treatment plant; Fresh Pond Master Plan implementation and reservation projects; and reservoir gaging station maintenance. In FY22, \$1.8 million from the Water Fund balance was used to support phase one of the SCADA implementation. For FY23, that amount will be increased to \$3.51 million.

Water and sewer revenues are generally linked to water consumption, with sewer costs comprising approximately 79.7% of total water and sewer expenditures. As a result of the gradual easing of COVID-19 pandemic related shutdowns, billed water consumption has remained approximately even in the first half of FY22 as compared to the first half of FY21.

Table 4 on page 5 indicates the details of Water Fund projected revenues and expenditures for FY22-27. Table 7 on page 8 shows actual Water Fund balances for FY17-21 and the projected balance for FY22.

## **SEWER**

The FY23 Sewer Budget reflects a \$1,507,357 increase from the FY22 Projected Budget. This includes the MWRA assessment, debt service payments, and the sewer component of the Public Works budget. Debt service on sewer bonds and the MWRA assessment account for 88% of the total FY23 Sewer Budget.

The preliminary FY23 MWRA assessment is scheduled to increase by \$1,031,971 or 3.7% from the final FY22 assessment. The MWRA rate increase projected for the City is subject to change based on the MWRA budget, which is adopted later in spring 2022. These changes have typically been minor in past years. Unlike the water budget, sewer revenues are credited to the general fund and not to a separate proprietary fund that can be drawn upon if the need arises.

Included in the sewer budget are debt service costs attributable to the \$12,260,000 general obligation bonds (net of premium) issued in March 2022, used to fund sewer projects in Alewife, and Harvard Square, as well as capital repairs and climate change projects.

The FY23 capital allotment of \$2,500,000 in sewer revenues will continue to finance the remedial reconstruction program.

The City Council has authorized significant investments in the water and sewer systems to ensure Cambridge continues to benefit from a healthy and environmentally sound water and sewer system. In addition to the projects currently under way, the City's five-year capital plan (FY23-27) calls for an additional investment of approximately \$189,463,729 (primarily sewer, \$173,518,729) in the water and sewer systems. The City carefully monitors the issuance of debt to fund authorized sewer projects and takes advantage of State MWRA interest free loans and grants to ensure that debt service cost increases, which impact the sewer rate, remain moderate.

Subsidies from the State Revolving Fund (SRF) loan program will cover only \$44,641 or 0.17% of the total debt service of \$26,491,458 for all FY23 sewer projects. The FY23-27 capital plan includes other projects that may be eligible for subsidized loans from the state. As in past years, it is not certain that these projects

will receive state subsidies and the debt service on these projects has been calculated based on funding through general obligation bonds. If state subsidies become available to the City, they will be used to lower the sewer rate in future years. Table 5 on page 6 shows the detail of sewer-related expenditures and revenues for FY22-27.

### **COMBINED WATER & SEWER**

The table below reflects the projected combined water and sewer metered revenue requirements needed to cover water and sewer expenditures.

**TABLE 1**

	<b>FY22 Projected</b>	<b>FY23 Budget</b>	<b>% Change</b>
Water	\$15,400,000	\$15,701,207	1.96%
Sewer	\$56,950,000	\$61,511,348	8.00%
Combined Water / Sewer Revenue	\$72,350,000	\$77,212,555	6.72%

FY23 budgeted revenues are based on FY22 projected collections and reflect our practice of conservative revenue projections.

The table below reflects the FY22 actual and FY23 proposed water and sewer rates.

**TABLE 2**

	<b>Annual Consumption*</b>	<b>FY22 Water Rate</b>	<b>FY23 Proposed Water Rate</b>	<b>FY22 Sewer Rate</b>	<b>FY23 Proposed Sewer Rate</b>
<b>Block 1</b>	0 – 40 CcF	\$3.05	\$3.11	\$13.51	\$14.59
<b>Block 2</b>	41 – 400 CcF	\$3.27	\$3.33	\$14.28	\$15.42
<b>Block 3</b>	401 – 2,000 CcF	\$3.47	\$3.54	\$15.34	\$16.57
<b>Block 4</b>	2,001 – 10,000 CcF	\$3.69	\$3.76	\$16.52	\$17.84
<b>Block 5</b>	Over 10,000 CcF	\$4.00	\$4.08	\$17.56	\$18.96

\*All rates are per CcF. CcF is an abbreviation of 100 cubic feet. One CcF is approximately 750 gallons.

The table below reflects the average change to combined water and sewer residential bills.

**TABLE 3**

<b>Residential Type</b>	<b>FY22 Average</b>	<b>FY23 Projected</b>	<b>Annual Variance</b>	<b>% Change</b>
Single Family	\$999	\$1,066	\$67	6.7%
Two Family	\$1,326	\$1,415	\$89	6.7%
Three Family	\$1,954	\$2,085	\$131	6.7%

### **SENIOR DISCOUNT PROGRAM**

There are currently 2,687 homeowners who qualify for the age 65+ water/sewer 15% discount (not to exceed \$90 annually), which is not tied to the homeowner's income.

There are also 64 elderly homeowners who qualify for an income-based discount of 30% (not to exceed \$180 annually). To qualify for the 30% discount, a homeowner must be 65 or older and must have been

granted the Clause 41C elderly real estate exemption. For FY22, the income guidelines are as follows: single, income of \$28,250 with assets of \$56,498 or less; married, income of \$42,377 with assets of \$77,685 or less.

### **FUTURE OUTLOOK FOR RATES**

Overall, the City has been extremely successful over the past five years in producing minimal water and sewer rate increases. The average annual increases for the FY19-23 period are as follows: water, 0.6%; sewer, 7.4%; and combined, 5.8%. The average annual increases for the FY14-23 period are as follows: water, 0.3%; sewer, 6.4%; and combined, 4.8%.

Tables 4, 5, 6 and 7 contain five-year forecasts for water, sewer, and combined revenue estimates as well as Water Fund balances for the past five years and the projected FY22 Fund Balance. The City will continue to review appropriate use of Fund Balance for a specific project, or to lower the rate.

As can be seen in Table 6, the annual combined water/sewer rate is projected to increase by an average of approximately 6.3% for FY23-27. The projected increase is the result of the City's commitment to bonding sewer infrastructure improvement projects and increases in the MWRA assessment. If the increases in MWRA assessment are moderate, the rate increases that are shown will be lowered. Conversely, if consumption decreases, there will be a negative effect on water and sewer revenues.

Our water and sewer program is structured to produce reasonable rate increases in the future. The goal of the City Administration and City Council is to minimize the effects of water and sewer rate increases on residents as much as possible, while continuing to provide major investment in our infrastructure.

Very truly yours,



Louis A. DePasquale  
City Manager

Attachments

**TABLE 4**  
**FY22-27 Water Projections**

	<b>FY22 Budget/Recap</b>	<b>FY22 Projected</b>	<b>FY23 Budget</b>	<b>FY24 Projected</b>	<b>FY25 Projected</b>	<b>FY26 Projected</b>	<b>FY27 Projected</b>
<b>Water Expenditures:</b>							
<b>Operating</b>	13,016,825	13,015,630	13,537,970	14,079,489	14,642,668	15,228,375	15,837,510
<b>Existing Debt</b>	-	-	-	-	-	-	-
<b>Subtotal Operating Budget</b>	<b>13,016,825</b>	<b>13,015,630</b>	<b>13,537,970</b>	<b>14,079,489</b>	<b>14,642,668</b>	<b>15,228,375</b>	<b>15,837,510</b>
<b>Capital</b>	3,500,000	3,500,000	2,487,000	2,487,000	2,487,000	2,487,000	2,487,000
<b>Capital- SCADA</b>	1,800,000	1,800,000	3,510,000	-	-	-	-
<b>Capital GAC filter media replacement</b>	-	-	-	-	800,000	1,500,000	1,500,000
<b>Finance</b>	225,000	225,000	225,000	225,000	225,000	225,000	225,000
<b>Conservation</b>	59,744	59,744	61,237	62,768	64,338	65,946	67,595
<b>Public Works</b>	400,000	400,000	400,000	400,000	400,000	400,000	400,000
<b>Community Development</b>	30,000	30,000	30,000	30,000	30,000	30,000	30,000
<b>Animal Commission</b>	10,000	10,000	10,000	10,000	10,000	10,000	10,000
<b>Total Expenditures</b>	<b>19,041,569</b>	<b>19,040,374</b>	<b>20,261,207</b>	<b>17,294,257</b>	<b>18,659,006</b>	<b>19,946,321</b>	<b>20,557,105</b>
<b>Assumptions:</b>							
1) Operating Budget for FY23 is based on City Manager's Submitted Budget and increases 4% for FY24-27.							
2) Debt Service decreases according to Debt Service Schedule.							
3) Capital as shown.							
4) All others remain constant from FY23-27, but Conservation will increase by 2.5%.							
5) GAC filter media replacement - \$2.2M from ARPA funds will be used in FY24 and FY25 (then \$1.5M annually).							
<b>Financing Plan</b>							
<b>Beginning Fund Balance*</b>	10,799,427	10,799,427	8,159,053	4,649,053	4,649,053	4,149,053	3,399,053
<b>Revenue:</b>							
<b>Meter Revenue</b>	16,241,569	15,400,000	15,701,207	16,294,257	17,159,006	18,196,321	19,307,105
<b>Miscellaneous Water Charges</b>	1,000,000	1,000,000	1,050,000	1,000,000	1,000,000	1,000,000	1,000,000
<b>From Fund Balance</b>	1,800,000	1,800,000	3,510,000	-	500,000	750,000	250,000
<b>Total Revenue</b>	<b>19,041,569</b>	<b>18,200,000</b>	<b>20,261,207</b>	<b>17,294,257</b>	<b>18,659,006</b>	<b>19,946,321</b>	<b>20,557,105</b>
<b>Total Expenditures</b>	19,041,569	19,040,374	20,261,207	17,294,257	18,659,006	19,946,321	20,557,105
<b>From Fund Balance</b>	1,800,000	1,800,000	3,510,000	-	500,000	750,000	250,000
<b>Ending Fund Balance</b>	<b>8,999,427</b>	<b>8,159,053</b>	<b>4,649,053</b>	<b>4,649,053</b>	<b>4,149,053</b>	<b>3,399,053</b>	<b>3,149,053</b>
<b>projected rate increase</b>			<b>1.96%</b>	<b>3.78%</b>	<b>5.31%</b>	<b>6.05%</b>	<b>6.10%</b>

**TABLE 5**  
**FY22-27 Sewer Projections**

	<b>FY22 Budget/Recap</b>	<b>FY22 Projected</b>	<b>FY23 Budget</b>	<b>FY24 Projected</b>	<b>FY25 Projected</b>	<b>FY26 Projected</b>	<b>FY27 Projected</b>
<b>Sewer Expenditures:</b>							
Public Works	4,469,953	4,469,953	4,803,840	4,995,994	5,195,833	5,403,667	5,619,813
Capital	2,750,000	2,750,000	2,500,000	3,500,000	3,500,000	5,000,000	5,500,000
Existing Debt	23,400,826	23,400,826	26,491,458	21,535,642	26,136,348	27,184,014	28,574,454
New Debt	2,699,133	2,699,133	-	6,646,813	5,725,000	5,287,500	5,937,500
Finance	225,000	225,000	225,000	225,000	225,000	225,000	225,000
Community Development	44,500	44,500	44,500	44,500	44,500	44,500	44,500
MWRA	27,943,480	27,759,220	28,791,191	30,058,003	31,380,556	32,761,300	34,399,365
<b>Total Expenditures</b>	<b>61,532,892</b>	<b>61,348,632</b>	<b>62,855,989</b>	<b>67,005,952</b>	<b>72,207,237</b>	<b>75,905,981</b>	<b>80,300,632</b>
<u>Assumptions:</u>							
1) The FY23 MWRA assessment is based on the preliminary estimate received from the MWRA and reflects a 3.7% increase from the final FY22 assessment.							
FY24-26 assessments are based on annual rate increases of 4.4%, and a 5% increase in FY27 (source: MWRA, March 2022).							
2) Public Works allocation increased by 7.5% in the FY23 budget and increased by 4% in FY24-27.							
3) Capital as shown.							
4) Debt Service increases according to Debt Service schedule.							
5) All others remain constant.							
<b>Financing Plan</b>							
<b>Revenue:</b>							
Sewer Service Charge	60,488,318	56,950,000	61,511,348	65,805,952	71,007,237	74,705,981	79,100,632
Non- Metered Sewer Revenues	1,000,000	1,400,000	1,300,000	1,200,000	1,200,000	1,200,000	1,200,000
MWPAT Subsidy (existing)	44,574	44,574	44,641	-	-	-	-
<b>Total Revenue</b>	<b>61,532,892</b>	<b>58,394,574</b>	<b>62,855,989</b>	<b>67,005,952</b>	<b>72,207,237</b>	<b>75,905,981</b>	<b>80,300,632</b>
<b>Projected Sewer Service Charge Increase</b>			<b>8.0%</b>	<b>7.0%</b>	<b>7.9%</b>	<b>5.2%</b>	<b>5.9%</b>

**TABLE 6**  
**Combined Water and Sewer**  
**FY22-27**

	<b>FY22 Budget/recap</b>	<b>FY22 Projected</b>	<b>FY23 Budget</b>	<b>FY24 Projected</b>	<b>FY25 Projected</b>	<b>FY26 Projected</b>	<b>FY27 Projected</b>
<b>Metered Water Revenue</b>	16,241,569	15,400,000	15,701,207	16,294,257	17,159,006	18,196,321	19,307,105
<b>Metered Sewer Revenue</b>	60,488,318	56,950,000	61,511,348	65,805,952	71,007,237	74,705,981	79,100,632
<b>Total</b>	76,729,887	72,350,000	77,212,555	82,100,209	88,166,243	92,902,302	98,407,737
<b>% increase</b>	-	-	<b>6.72%</b>	<b>6.33%</b>	<b>7.39%</b>	<b>5.37%</b>	<b>5.93%</b>

**TABLE 7**  
**Water Fund Balances**  
**FY17-22**

	<b>As of 6/30/17</b> <b>(Actual)</b>	<b>As of 6/30/18</b> <b>(Actual)</b>	<b>As of 6/30/19</b> <b>(Actual)</b>	<b>As of 6/30/20</b> <b>(Actual)</b>	<b>As of 6/30/21</b> <b>(Actual)</b>	<b>As of 6/30/22</b> <b>(Projected)</b>
<b>Water Fund Balance</b>	9,948,999	10,655,609	11,662,943	12,221,893	10,799,427	8,159,053