



CITY OF CAMBRIDGE • EXECUTIVE DEPARTMENT

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*Robert W. Healy, City Manager*      *Richard C. Rossi, Deputy City Manager*

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March 19, 2012

To the Honorable, the City Council:

**RECOMMENDATIONS**

That the City Council approve the following block rates for water consumption and sewer use for the period beginning April 1, 2012 and ending March 31, 2013. The City administration and City Council continue to recognize that it is important to mitigate the effects of water and sewer increases both for FY13 and future fiscal years as much as possible. Therefore, I am pleased to submit for the second year in a row a recommendation that calls for a 0% increase in the water rate and a 0% increase in the sewer rate, resulting in a 0% increase in the combined rate. This is the first time that the City has been able to produce a 0% rate increase for two consecutive years.

It is important to note that water consumption, along with the budget (including the Massachusetts Water Resources Authority (MWRA) assessment), are the major factors in determining the rate necessary to generate sufficient water and sewer revenues. The total FY13 Water Budget reflects a budget decrease of 0.5% from the FY12 Budget and the total FY13 Sewer Budget reflects a 0% increase from FY12 Budget. The primary reason for the decrease in the Water Budget is a significant decrease in the debt service account due to the retirement of the bonds for construction at the Stony Brook Reservoir as well as a decrease in the Other Ordinary Maintenance account due to energy cost reductions which offsets a planned substantial increase in the pay-as-you-go component of the capital budget, as well as increases in the Salaries and Wages account due to cost-of-living allowances and benefit increases. A similar situation exists in the Sewer Budget where a planned substantial decrease in the pay-as you-go allocation in the capital budget and a lower-than-anticipated MWRA assessment offset increases in the Debt Service account as well as the Sewer component of the Public Works Budget.

Water and Sewer charges are directly linked to water consumption, with sewer costs comprising approximately 2/3 of total water and sewer expenditures. Therefore, when consumption declines, revenues are negatively impacted. In the current fiscal year, water is being consumed at a 1.4% lower rate from the previous fiscal year. In FY11, water was consumed at a 1.8% higher rate than in FY10 where there was also a slight increase of 1.2% in water use from the previous fiscal year. The last consumption decrease, prior to FY12, occurred in FY09, which saw a 4.1% decrease from FY08.

In my recommendation to you last year, the projected FY13 rate increases for water, sewer and combined were 4.1%, 5.7%, and 5.2%, respectively, based on March 2011 consumption rates and projected budget. We have, however, been able to produce rates significantly lower than estimates from last year due primarily to lower debt service costs as a result of very favorable market conditions at the time of the February 2012 bond sale and a 0% loan from the Massachusetts Water Pollution Abatement Trust (MWPAT) as well as 2.3% decrease in the MWRA assessment rather than the 2.6% increase projected when the FY12 Sewer rate was being developed. A similar situation exists with the Water rate in that the operating and capital budgets show a much smaller increase than what was shown for FY13 in the March 2011 rate setting letter.

Overall, the City has been extremely successful over the past five years in producing reasonable water and sewer rate increases. The average annual increases for the FY08-12 period were as follows: Water, 1.3%; Sewer, 4.1%; and Combined, 3.2%, which include both the water and sewer rates showing 0% increases in FY08 and FY12.

FY13 estimated sewer revenues will cover the FY13 estimated Massachusetts Water Resources Authority (MWRA) assessment, which is scheduled to decrease by \$489,803 to \$21,006,052 or -2.3%. The MWRA rate decrease projected for the City is subject to change based on the MWRA budget which is adopted later in the Spring 2012. These changes have typically been minor in past years.

In February 2012, the City issued \$20,350,000 in bonds to finance several sewer reconstruction projects throughout the City and has received a loan from the MWPAT for \$12,853,553. The annual debt service costs attributable to these bonds are included in the sewer budget.

FY13 estimated water revenues will cover increases in costs related to cost-of-living-allowances and health benefits in the Salaries and Wages portion of the operating budget as well as a significant increase in the capital budget, offset by a significant decrease in debt service. Debt service costs continue to decline, by \$847,175 this year, due to the pay-off of a portion of the bonds for construction at Stony Brook Reservoir and additional debt service savings generated by the refinancing of existing debt in 2007. The projected fund balance for FY12 is \$7,128,577 of which \$250,000 will be used in FY13 to support a 0% rate increase, similar to the amount used in FY12.

The chart below reflects the FY12 actual and FY13 proposed water and sewer rates.

	<b>Annual Consumption*</b>	<b>FY12 Water Rate</b>	<b>FY13 Proposed Water Rate</b>	<b>FY12 Sewer Rate</b>	<b>FY13 Proposed Sewer Rate</b>
<b>Block 1</b>	0 – 40 CcF	\$3.02	\$3.02	\$7.86	\$7.86
<b>Block 2</b>	41 – 400 CcF	\$3.24	\$3.24	\$8.32	\$8.32
<b>Block 3</b>	401 – 2,000 CcF	\$3.44	\$3.44	\$8.93	\$8.93
<b>Block 4</b>	2,001 – 10,000 CcF	\$3.65	\$3.65	\$9.62	\$9.62
<b>Block 5</b>	Over 10,000 CcF	\$3.96	\$3.96	\$10.23	\$10.23

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

## **BACKGROUND**

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 MWRA budget; therefore, revenue needs are based upon estimated expenditures. Historically, water and sewer rates have been established so that revenues generated by them, when combined with other revenue sources, cover projected annual costs.

The projected FY13 rate increases of 0% for both water and sewer are lower than the five year averages of 1.3% and 4.1% and are lower than were estimated last year. It should be noted that the water and sewer rate increases of 0% in FY12 and FY13 are rare occurrences and demonstrate our commitment to keep rates low by controlling expenditures, while investing in our infrastructure.

## WATER

Beginning 13 fiscal years ago (2000), a portion of the fund balance from the Water Fund has been used to offset increases in the operation of the Water Department. In FY13, the fund balance support will be \$250,000, which is equal to the amount used in the FY12 budget. The \$250,000 used in both FY12 and FY13 represents a significant decrease in the use of fund balances from prior fiscal years and coincides with the drop-off in debt and operating costs. For example, the estimated use of fund balance for FY10 was \$1,250,000. By using \$250,000 from the fund balance in FY13, the City is able to achieve a 0% water rate increase while providing a significant increase in capital funds for infrastructure improvements. It is expected that use of the fund balance will be eliminated in FY14, as the decreases in water debt service continue. As Table 3 on page 6 indicates, the total FY13 water operating and capital budget decreased by 0.5% from \$18,346,575 in FY12 to \$18,249,655 in FY13. As noted above, the decrease in debt service has offset slight increases in the operating budget and a substantial increase in the capital budget.

The planned capital allocation has increased \$650,000 from its FY12 level of \$2,750,000 to \$3,400,000 in FY13 as the Water Department moves from a debt-financed capital improvement plan to a pay-as-you-go capital plan based on current revenues. Table 3 on page 6 indicates the details of Water Fund projected revenues and expenditures for the years 2012 to 2017. Table 6 on page 9 shows actual Water Fund balances for FY07-11 and the projected balance for FY12.

## SEWER

The total Sewer budget has been level funded, due primarily to a planned decrease in the capital budget of \$1,500,000 and a reduction in the MWRA assessment of \$489,803 offsetting a debt service increase of \$2,060,928 and an operating budget increase of \$153,640. It is proposed that the sewer component of the capital budget be significantly lowered from its FY12 level of \$2,250,000 to \$750,000 in FY13 in order to fund the new debt service on several major sewer reconstruction projects without having an adverse effect on the sewer rate. The significant increase in the pay-as-you-go component in FY12 provided sufficient funds to cover several sewer projects not large enough to require bond-financing.

The decrease in the MWRA assessment is significantly lower than the projection in the FY12 letter and is a contributing factor as to why the rate has been stabilized at its current level.

It should be noted that the MWRA assessment and debt service on sewer bonds account for 90% of the total Sewer budget. The Sewer operating budget is slightly above its FY12 level, while the capital allocation has decreased by \$1,500,000 to \$750,000.

However, 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. Therefore, when projecting FY13 Sewer Service revenues, an assumption of a 0.5% decrease in consumption has been factored into the calculations.

## CAPITAL PROJECTS

The sewer debt service increase is primarily attributable to the debt service on the General Obligation Bonds issued in February 2012 and MWPAT loan exceeding the savings generated from the retirement of General Obligation Bonds from 2001. The following sewer projects were included in the February 2012 bond issue: Agassiz; Cherry Street / S. Mass. Avenue; Cambridgeport; Harvard Square; Western Avenue; and Alewife Watershed projects. Since May 1998, the City Council has authorized \$312,391,030 for water and sewer capital projects in the Capital Budget process through FY12. This impressive investment in our water and sewer systems represents significant progress towards ensuring that Cambridge will continue to benefit throughout this century from a healthy and environmentally sound water and sewer

system. In addition to the projects currently under way, the five-year capital plan (FY13-17) calls for an additional investment of approximately \$162,262,666 (primarily sewer, \$145,512,666) in the water and sewer systems.

The allotment of \$750,000 in sewer revenues to the capital fund will continue to finance the remedial reconstruction program (\$600,000) as well as the development of a Climate Change Adaptation Plan (\$150,000 was included in FY12 with an additional \$150,000 set aside in FY13). This involves conducting an assessment of vulnerabilities, and working with the community to develop a plan with adaptation strategies, which may include strengthening sewer and stormwater infrastructure to protect against flooding.

Sewer improvements are projected to continue in the following areas: Cherry Street / South Massachusetts Avenue; Agassiz Neighborhood; Alewife Watershed; Cambridgeport; Harvard Square; and Western Avenue. The City carefully monitors the issuance of debt to fund authorized sewer projects and makes adjustments to ensure that debt service cost increases, which impact the sewer rate, are moderate.

The allocation of \$3,400,000 for water capital will be used mainly for several energy reduction projects including the design and installation of photovoltaic panels, installation of Variable Frequency Drives (VFDs) on raw water pumps to increase efficiency at variable flows, installation of both interior and exterior LED lighting, and replacement of boiler and installation of VFDs on chilled water pumps. Other FY13 capital projects include improvements to the distribution and transmission system including water main replacement on main streets in conjunction with sewer reconstruction projects planned by Public Works, equipment replacement, improvements to security control systems, engineering and program development, and improvements to the watershed.

During the past decade, the State has made substantial contributions to the City's water and sewer capital improvement program through the State Revolving Loan Program. With most of the large water and sewer projects that were financed in part through loans from this program having been completed, state subsidies covered only \$94,031, or 0.6% of the total debt service of \$16,607,233. The City will continue to receive State subsidies on existing debt. As mentioned previously, the City has received a loan from the MWPAT for \$12,853,553 with subsidies of \$1,427,708 covering a portion of the debt service over the 10 year term of the project. The FY13-17 capital plan includes other projects that may be eligible for subsidized loans from the State. However, since it is not certain that these projects will receive state subsidies, the debt service on these projects has been calculated based on funding through General Obligation bonds. In order to proceed with the projects while restricting the growth of the sewer rate, the original five-year plan for sewer projects has been extended, since the total debt service on the loans will be covered through the sewer service charge. If state subsidies become available to the City, they will be used to lower the sewer rate in future years. Table 4 on page 7 shows the detail of sewer-related expenditures for FY12-17.

Table 1 below summarizes the change in water and sewer metered revenue, while Table 2 presents the estimated average charge to residential water/sewer bills.

FY13 projected revenues are based on FY12 projected collections and reflect our practice of conservative revenue projections.

**TABLE 1  
Combined Water / Sewer Metered Revenue**

	FY12 Revised	FY13 Projected	% Change
Water	\$17,250,000	\$17,249,655	0%
Sewer	\$38,650,000	\$38,401,114 *	0%
Combined Water / Sewer Revenue	\$55,900,000	\$55,650,769	0%

\*Reflects projected consumption decrease in FY13

TABLE 2  
Average Change to Combined Water and Sewer Residential Bills

Residential Type	FY12	FY13 Projected	Annual Variance	% Change
Single Family	\$764	\$764	\$0	0%
Two Family	\$1,011	\$1,011	\$0	0%
Three Family	\$1,528	\$1,528	\$0	0%

**SENIOR DISCOUNT PROGRAM**

There are currently 2,646 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 101 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 FY12, the income guidelines are as follows: single, income of \$23,442 with assets of \$46,883 or less; married, income of \$35,163 with assets of \$64,464 or less.

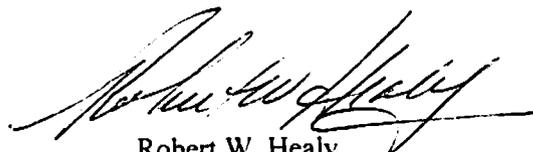
**FUTURE OUTLOOK FOR RATES**

Tables 3, 4, 5 and 6 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 FY12 fund balance. As can be seen in Table 5, the annual combined water / sewer rate is projected to increase by an average of approximately 4.7% for FY13-17. The projected increase is the result of the City's infrastructure improvement program and increases in the MWRA assessment (based on estimates received from the MWRA) of between 5.2-10.2% in FY13 through FY17. If increases in the MWRA assessment are more moderate and subsidies for new State Revolving Fund loans are funded, the rate increases that are shown will be lowered, which was the case in FY13. If consumption increases and therefore revenues increase, rate increases will be affected positively. Conversely, if consumption were to continue to decrease, there will be a negative effect on water and sewer revenues.

Because of our planning process, which includes conservatively estimating our water and sewer revenues and controlling expenditure growth, including debt issuance, we have been able to recommend a 0% rate increase while still investing in our utility infrastructure.

I believe we have structured our water and sewer program to produce reasonable rate increases in the future to meet the City administration and City Council goal to mitigate the effects of water and sewer increases on residents as much as possible, while investing in our infrastructure.

Very truly yours,



Robert W. Healy  
City Manager

RWH/mec  
Attachments

**Table 3  
Water Projections  
FY12-17**

<b>Water Expenditures:</b>	<b>FY12 Budget / Recap</b>	<b>FY12 Projected</b>	<b>FY13 Projected</b>	<b>FY14 Projected</b>	<b>FY15 Projected</b>	<b>FY16 Projected</b>	<b>FY17 Projected</b>
Operating	10,372,640	10,036,025	10,461,275	10,879,726	11,314,915	11,767,512	12,238,212
Existing Debt	4,529,980	4,529,980	3,682,805	3,112,305	2,866,503	2,745,503	2,624,503
Subtotal Operating Budget	14,902,620	14,566,005	14,144,080	13,992,031	14,181,418	14,513,015	14,862,715
Capital	2,750,000	2,750,000	3,400,000	3,500,000	3,350,000	3,250,000	3,250,000
Finance	225,000	225,000	225,000	225,000	225,000	225,000	225,000
Conservation	38,955	38,955	40,575	40,575	40,575	40,575	40,575
Public Works	400,000	400,000	400,000	400,000	400,000	400,000	400,000
Community Development	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Animal Commission	-	-	10,000	10,000	10,000	10,000	10,000
<b>Total</b>	<b>18,346,575</b>	<b>18,009,960</b>	<b>18,249,655</b>	<b>18,197,606</b>	<b>18,236,993</b>	<b>18,468,590</b>	<b>18,818,290</b>
<b>Assumptions:</b>							
1) Operating Budget for FY13 is based on City Manager's Submitted Budget and increases 4% for FY14-17.							
2) Capital as shown.							
3) All others remain constant from FY13-17.							
<b>Revenue / Change in Fund Balance</b>							
Beginning Fund Balance	6,988,537	6,988,537	7,128,577	6,878,577	6,878,577	6,878,577	6,878,577
Meter Revenue	17,346,575	17,250,000	17,249,655	17,447,606	17,486,993	17,718,590	18,068,290
Miscellaneous Water Charges	750,000	900,000	750,000	750,000	750,000	750,000	750,000
From Fund Balance (Operating)	250,000	250,000	250,000	-	-	-	-
<b>Total Revenue</b>	<b>18,346,575</b>	<b>18,400,000</b>	<b>18,249,655</b>	<b>18,197,606</b>	<b>18,236,993</b>	<b>18,468,590</b>	<b>18,818,290</b>
<b>Total Expenditures</b>	<b>18,346,575</b>	<b>18,009,960</b>	<b>18,249,655</b>	<b>18,197,606</b>	<b>18,236,993</b>	<b>18,468,590</b>	<b>18,818,290</b>
From Fund Balance	250,000	250,000	250,000	-	-	-	-
<b>Ending Fund Balance</b>	<b>6,738,537</b>	<b>7,128,577</b>	<b>6,878,577</b>	<b>6,878,577</b>	<b>6,878,577</b>	<b>6,878,577</b>	<b>6,878,577</b>
<b>Projected Rate Increase</b>	<b>N/A</b>	<b>N/A</b>	<b>0.0%</b>	<b>1.1%</b>	<b>0.2%</b>	<b>1.3%</b>	<b>2.0%</b>

Table 4  
Sewer Projections  
FY12-17

Sewer Expenditures	FY12 Budget / Recap	FY12 Projected	FY13 Projected	FY14 Projected	FY15 Projected	FY16 Projected	FY17 Projected
Public Works	2,720,580	2,680,890	2,874,220	2,989,189	3,108,756	3,233,107	3,362,431
Capital	2,250,000	2,250,000	750,000	1,000,000	1,500,000	2,000,000	2,000,000
Existing Debt	12,077,253	12,077,253	14,138,181	12,059,745	10,842,178	8,515,054	7,315,492
New Debt				2,831,938	5,649,063	8,703,500	12,031,438
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	21,699,797	21,495,855	21,006,052	22,119,373	23,601,371	24,828,642	27,361,163
Total	39,017,130	38,773,498	39,037,953	41,269,745	44,970,868	47,549,803	52,350,024
<p>1) The FY13 MWRA assessment is based on the preliminary estimate received from the MWRA and reflects a 2.3% decrease from the revised FY12 assessment. FY14-17 assessments are based on annual rate increases of 5.3%, 6.7%, 5.2% and 10.2%, respectively.</p> <p>2) Public Works allocation increases by 5.6% in FY13 over the FY12 Budget with increases of 4% estimated in FY14-17.</p> <p>3) Capital is funded at \$750,000 in FY13, \$1,000,000 in FY14, \$1,500,000 in FY15, and \$2,000,000 in FY16-17.</p> <p>4) Debt Service increases according to Debt Service schedule.</p> <p>5) All others remain constant.</p>							
Financing Plan							
Sewer Service Charge	38,398,099	38,650,000	38,401,114	40,640,316	44,352,800	46,999,803	51,800,024
Non-Metered Sewer Revenues	525,000	850,000	550,000	550,000	550,000	550,000	550,000
MWPAT Subsidy (existing)	94,031	94,031	86,839	79,429	68,068	-	-
Total	39,017,130	39,594,031	39,037,953	41,269,745	44,970,868	47,549,803	52,350,024
Sewer Service Charge Increase	N/A	N/A	0.0%	5.8%	9.1%	6.0%	10.2%
<p>1) FY13 Projected based on .5% consumption decrease.</p>							

Table 5  
 Combined Water and Sewer Projections  
 FY12-17

	FY12 Budget / Recap	FY12 Projected	FY13 Budget	FY14 Projected	FY15 Projected	FY16 Projected	FY17 Projected
Metered Water Revenue	17,346,575	17,250,000	17,249,655	17,447,606	17,486,993	17,718,590	18,068,290
Metered Sewer Revenue	38,398,099	38,650,000	38,401,114	40,640,316	44,352,800	46,999,803	51,800,024
<b>Total</b>	<b>55,744,674</b>	<b>55,900,000</b>	<b>55,650,769</b>	<b>58,087,922</b>	<b>61,839,793</b>	<b>64,718,393</b>	<b>69,868,314</b>
<b>% Increase</b>	-	-	0.0%	4.4%	6.5%	4.7%	8.0%

**Table 6  
Water Fund Balances  
FY07-12**

	As of 6/30/07	As of 6/30/08	As of 6/30/09	As of 6/30/10	As of 6/30/11	As of 6/30/12
	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Projected)
<b>Water Fund Balance</b>	<b>6,715,319</b>	<b>7,536,978</b>	<b>6,381,652</b>	<b>6,312,443</b>	<b>6,988,537</b>	<b>7,128,577</b>