

## NOTICES :

1. On January 22, 2014, the Board of Estimates approved the Resolution on the Regulation of Board of Estimates Meetings and Protests, effective February 05, 2014. Pursuant to the Resolution:

a. Anyone wishing to speak before the Board, whether individually or as the spokesperson of an entity must notify the Clerk of the Board in writing no later than by noon on the Tuesday preceding any Board meeting, or by an alternative date and time specified in the agenda for the next scheduled meeting. The written protest must state (1) whom you represent and the entity that authorized the representation (2) what the issues are and the facts supporting your position and (3) how the protestant will be harmed by the proposed Board action.

b. Matters may be protested by a person or any entity directly and specifically affected by a pending matter or decision of the Board. In order for a protest to be considered, the protestant must be present at the Board of Estimates meeting.

c. A Procurement Lobbyist, as defined by Part II, Sec. 8-8 (c) of The City Ethics Code must register with the Board of Ethics as a Procurement Lobbyist in accordance with Section 8-12 of the City Ethics Code.

The full text of the Resolution is posted in the Department of Legislative Reference, the President of the Board's web site, ([http://www.baltimorecitycouncil.com/boe\\_agenda.htm](http://www.baltimorecitycouncil.com/boe_agenda.htm)) and the Secretary to the Board's web site (<http://www.comptroller.baltimorecity.gov/BOE.html>).

Submit Protests to:  
Attn: Clerk,  
Board of Estimates  
Room 204, City Hall  
100 N. Holliday Street  
Baltimore, Maryland 21202

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2. **BOARD OF ESTIMATES' RECESS**  
**SEPTEMBER 7, 2016**

The Board of Estimates is scheduled to be in recess at 9:00 a.m. and 12:00 noon on September 7, 2016.

The Board of Estimates will not receive or open bids on September 7, 2016. The Board of Estimates will reconvene on September 14, 2016.

**BOARD OF ESTIMATES' AGENDA - AUGUST 31, 2016**

Department of Public Works/ - Public Hearing on Proposed  
Department of Finance Water and Sewer Rate Increases  
and Miscellaneous Fee Increases

**ACTION REQUESTED OF B/E:**

The Board is requested to approve the proposed water and sewer rate increases and proposed miscellaneous fee increases.

**BACKGROUND/ EXPLANATION:**

Pursuant to Ordinance 941 which implements the City Charter Amendment, approved by the voters in 1978, the water and wastewater utilities must be maintained as self-sustaining operations. Under this Ordinance, it is the duty of the Director of Finance and the Director of Public Works to recommend to the Board of Estimates rates and charges to make the utilities self-sustaining.

The City is finalizing the replacement of all residential and commercial water meters in both Baltimore City and Baltimore County. The new meters are being outfitted with the Automatic Metering Infrastructure (AMI) technology in the City and Automatic Metering Reading (AMR) and AMI technology in the county. This upgrade will provide greater accuracy in meter reading and improve the timeliness of billing, reduce the number of estimated bills resulting from limited access to meters, improve customer service by providing detailed and timely responses to customer inquiries, and reduce water loss through continuous monitoring and enhanced operational efficiencies.

In addition, the City is replacing the water and sewer customer information and billing system. We have begun testing this system and have started training our employees on its use. Along with this change, we will be transitioning from quarterly to monthly billing. The new billing system is expected to go-live for Baltimore City customers on October 11, 2016.

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Compliance with Federal and State mandates, protecting public health and environment, as well as investing in our aging underground water and sewer systems will require the City to continue to allocate revenues to fund multimillion dollar capital projects. The Water Capital Improvement Plan over the next six years is estimated to be \$1.3 billion in appropriations. This includes water main rehabilitation and replacement, the covering of finished open water reservoirs, the rehabilitation of the Vernon, Cromwell, Pikesville, Towson and Ashburton pumping stations, improvements to the Montebello Water Filtration Plant, and the design and construction of the new Fullerton Water Filtration Plant. The Wastewater Capital Improvement Plan over the next six years is estimated to be \$701.1 million in appropriations. This includes regulatory-driven enhanced nutrient removal upgrades at the Back River Wastewater Treatment Plant, the headworks improvements at Back River and Consent Decree corrective action improvements.

To be able to maintain the utilities as self-sustaining, we are requesting approval on the proposed changes to our existing charge structure, a modified water and sewer rate structure, a forecast for three-year rate increases, and proposed increases to the utilities' miscellaneous fees.

Proposed Rate Structure:

The implementation of the new billing system is complemented by an enhancement of the existing rate structure. The proposed rate structure will eliminate the current use of minimum billing charges and will provide transparency by breaking down the bill to show customers exactly what costs are included in their bills. The proposed new rate structure eliminates the current declining block water rates, which results in large volume water users paying a lower rate per unit of water. Instead, by switching to a more equitable rate structure, the same volumetric rates will apply to all customers. This change will encourage conservation of water and will promote conscientious water usage practices.

The proposed rate structure includes two fixed components and a volumetric component. The fixed components are:

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1. An Account Management Fee intended to recover the cost of billing and related support services to our customers and their accounts. This will be charged as a flat monthly fee per bill.
  
2. An Infrastructure Charge intended to recover a portion of capital costs for investing in our pipes, plants, and other assets that benefit all customers. The infrastructure charge will have separate water and sewer rate components charged by meter size.

The water and sewer systems budgets are primarily fixed costs that are independent of the volume of water used and treated. With the proposed rate structure, the fixed components recover a portion of these expenses that benefit all customers so the utility is less dependent on volumetric consumption. The volumetric component of the proposed rate structure applies to each unit of water and sewer in a billing period. One unit equals 100 cubic feet (CCF), or approximately 748 gallons. The volumetric rates will be applied with the first unit of consumption. The following table details the proposed monthly rate structure and the rates over the upcoming three-year period.

<b>Fixed Components</b>						
	<b>Proposed October 11, 2016</b>	<b>Proposed July 1, 2017</b>	<b>Proposed July 1, 2018</b>			
<b>Account Management Fee</b>	\$2.720	\$2.979	\$3.263			
<b>Infrastructure Charge</b>	<b>Proposed October 11, 2016</b>		<b>Proposed July 1, 2017</b>		<b>Proposed July 1, 2018</b>	
<b>Meter Size</b>	<b>Water</b>	<b>Sewer</b>	<b>Water</b>	<b>Sewer</b>	<b>Water</b>	<b>Sewer</b>
5/8"	\$8.150	\$7.070	\$8.957	\$7.706	\$9.844	\$8.400
3/4"	\$14.670	\$12.726	\$16.122	\$13.871	\$17.718	\$15.119
1"	\$32.600	\$28.280	\$35.827	\$30.825	\$39.374	\$33.599
1-1/2"	\$57.050	\$49.490	\$62.698	\$53.944	\$68.905	\$58.799
2"	\$130.400	\$113.120	\$143.310	\$123.301	\$157.498	\$134.398
3"	\$228.200	\$197.960	\$250.792	\$215.776	\$275.620	\$235.196
4"	\$521.600	\$452.480	\$573.238	\$493.203	\$629.989	\$537.591
6"	\$937.250	\$813.050	\$1,030.038	\$886.225	\$1,132.012	\$965.985
8"	\$1,467.000	\$1,272.600	\$1,612.233	\$1,387.134	\$1,771.844	\$1,511.976
10"	\$2,078.250	\$1,802.850	\$2,283.997	\$1,965.107	\$2,510.113	\$2,141.967
12"	\$3,708.250	\$3,216.850	\$4,075.367	\$3,506.367	\$4,478.828	\$3,821.940

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<b>Variable Component</b>						
	<b>Proposed October 11, 2016</b>		<b>Proposed July 1, 2017</b>		<b>Proposed July 1, 2018</b>	
	<b>Water</b>	<b>Sewer</b>	<b>Water</b>	<b>Sewer</b>	<b>Water</b>	<b>Sewer</b>
<b>Volumetric Rate (all Units)</b>	\$2.260	\$6.160	\$2.484	\$6.714	\$2.730	\$7.318

If adopted, the proposed rates will be effective on the dates of October 11, 2016, July 1, 2017, and July 1, 2018, with the existing rates remaining in place until then.

Required Rate Increases/Proposed Rate Structure:

The required rate increases and proposed rate structure are necessary to ensure fiscal sustainability and to keep the utilities self-sustaining. The proposed rate structure has been designed on the basis of a "revenue neutral" concept. The proposed rate structure and required rate increases have been designed to generate the same level of revenue that the current rates would have generated with across-the-board rate increases of 9.9% and 9.0% for water and sewer, respectively.

The following table shows the proposed rate increases for the current and the next two fiscal years (the fiscal year starts on July 1<sup>st</sup> and ends on June 30<sup>th</sup>). For Fiscal 2017, the proposed rate increases will not be effective for a full year and will start October 11, 2016.

<b>Proposed Rate Increases</b>		
	<b>Water</b>	<b>Wastewater</b>
October 11, 2016	9.9%	9.0%
July 1, 2017	9.9%	9.0%
July 1, 2018	9.9%	9.0%

Due to the elimination of the quarterly minimum allowance and other revisions to the charge structure, the impacts of the proposed rate structure on customer bills will vary by meter size and consumption level. In other words, if the City chose not to change the existing rate structure, all customers, assuming no change in their consumption patterns, would have experienced a 9.9% increase in their water and 9% increase in their sewer bills; however, under the proposed rate structure, some customers will pay more but others will pay less while the City generates the same amount of revenue.

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For example, without changing the rate structure, the proposed rate increases would result in a Fiscal 2017 total water and sewer bill increase of 9.4% per year for a typical Baltimore City residential customer with a 5/8" meter consuming 21 ccf per quarter (or 7 ccf per month). This represents a monthly increase of \$6.99 or \$20.96 per quarter; however, under the proposed change to the rate structure, the same customer would see an increase of approximately 3.4% in Fiscal 2017, which equates to \$2.50 per month or \$7.52 per quarter.

<b>Proposed Customer Bill Impacts</b>					
<i>Quarterly Charges for 5/8" Meter and 21 Ccf</i>					
	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>
	<i>Existing Structure</i>		<i>Proposed Structure</i>		
Account Management Fee			\$8.16	\$8.94	\$9.79
Infrastructure Charge			\$45.66	\$49.99	\$54.73
Water Bill	\$ 95.19	\$ 104.62	\$ 47.46	\$ 52.16	\$ 57.33
Sewer Bill	\$ 127.93	\$ 139.46	\$ 129.36	\$ 140.99	\$ 153.68
<b>Total Bill</b>	<b>\$ 223.12</b>	<b>\$ 244.08</b>	<b>\$ 230.64</b>	<b>\$ 252.09</b>	<b>\$ 275.53</b>

As an example of what the "revenue neutral" concept is, the following table shows a hypothetical example of 10 water customers with different consumption patterns (it is assumed that all customers have the same water meter size). The example shows a hypothetical rate structure for explanation of the concept, this is not the proposed rate structure.

Scenario Comparison - Revenue Neutral Concept														
Scenario 1				Scenario 2 - Rate Increase				Scenario 3 - Hypothetical New Rate Structure						
Customer	Units Consumed	Rate / Unit	Water Bill	Rate Increase	New Rate / Unit	New Water Bill	% Bill Increase (1)	Fixed Charge	Required Revenue	Variable Rate / Unit	Variable Charge	New Water Bill	% Bill Increase (2)	Net Bill Increase
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)
			(C) = (A) x (B)		(E) = (B) x (1 + (D))	(F) = (A) x (E)	(G) = (F) / (C) - 1		(I) = (F) - (H)	(J) = Σ (I) / Σ (A)	(K) = (A) x (J)	(L) = (H) + (K)	(M) = (L) / (C) - 1	(N) = (M) - (G)
1	110	\$5	\$550	5.0%	\$5.25	\$578	5.0%	\$10	\$568	\$5.19	\$570.40	\$580.40	5.5%	0.5%
2	120	\$5	\$600	5.0%	\$5.25	\$630	5.0%	\$10	\$620	\$5.19	\$622.26	\$632.26	5.4%	0.4%
3	130	\$5	\$650	5.0%	\$5.25	\$683	5.0%	\$10	\$673	\$5.19	\$674.11	\$684.11	5.2%	0.2%
4	140	\$5	\$700	5.0%	\$5.25	\$735	5.0%	\$10	\$725	\$5.19	\$725.97	\$735.97	5.1%	0.1%
5	150	\$5	\$750	5.0%	\$5.25	\$788	5.0%	\$10	\$778	\$5.19	\$777.82	\$787.82	5.0%	0.0%
6	160	\$5	\$800	5.0%	\$5.25	\$840	5.0%	\$10	\$830	\$5.19	\$829.68	\$839.68	5.0%	0.0%
7	170	\$5	\$850	5.0%	\$5.25	\$893	5.0%	\$10	\$883	\$5.19	\$881.53	\$891.53	4.9%	-0.1%
8	180	\$5	\$900	5.0%	\$5.25	\$945	5.0%	\$10	\$935	\$5.19	\$933.39	\$943.39	4.8%	-0.2%
9	190	\$5	\$950	5.0%	\$5.25	\$998	5.0%	\$10	\$988	\$5.19	\$985.24	\$995.24	4.8%	-0.2%
10	200	\$5	\$1,000	5.0%	\$5.25	\$1,050	5.0%	\$10	\$1,040	\$5.19	\$1,037.10	\$1,047.10	4.7%	-0.3%
<b>Total</b>	<b>1,550</b>		<b>\$7,750</b>			<b>\$8,138</b>		<b>\$100</b>	<b>\$8,038</b>		<b>\$8,038</b>	<b>\$8,138</b>		

Scenario 1: Customers Pay per unit consumed

Scenario 2: Customers subject to 5% increase in rate, but continue paying per unit consumed

Scenario 3: Hypothetical new rate structure. Fixed component and volumetric charge

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- Scenario 1 represents what these customers currently pay without rate increases. The total consumption is 1,550 units while the total revenue is \$7,750.00 (Column C).
- Under Scenario 2, all these customers are subject to a 5% increase in their water rates; therefore, at the same level of consumption, Customer 1 pays \$28.00 more while customer 10 pays \$50.00 more, both values equivalent to 5% more than their prior water bills. The total amount of revenue generated after the rate increase is \$8,138.00 (Column F).
- Scenario 3 shows the incorporation of a hypothetical new rate structure that includes a fixed component of \$10.00 per customer. Since all customers are subject to this fixed charge, there is \$100.00 of revenue generated even if consumption is zero; however, in order to be "revenue neutral" there is \$8,038.00 that needs to be recovered by the variable rate.
- Assuming that all 10 customers do not change their consumption patterns, it is determined that the variable rate per unit that would generate the required amount of revenue is \$5.19 (Column J).
- The new water bill is determined by applying the variable rate to each customer's consumption and adding the fixed component. By doing so, the "revenue neutral" concept is achieved (Column F equals Column L with a total of \$8,138.00 in revenue). As detailed in Column M, customer 1 is now paying 5.5% more while customer 10 will be paying 4.7% more, or as detailed in Column N, customer 1 is now paying 0.5% more while customer 10 will be paying 0.3% less than what they would have been paying under the current structure after a rate increase.

In order to facilitate the understanding of the proposed changes, the City has made available online an interactive tool for customers to assess the impact of the required rate increases and the proposed rate structure at any given meter size and consumption level. This tool can be found at: <http://publicworks.baltimorecity.gov/water-billing-calculator>



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County Rates:

It is proposed that the Howard, Anne Arundel and Carroll counties wholesale rates be increased as follows:

<b>Proposed Water County Rates</b>			
<b>Howard County</b>	<b>Fiscal 2017</b>	<b>Fiscal 2018</b>	<b>Fiscal 2019</b>
Wholesale Service (all Units)	\$2.147	\$2.360	\$2.594
<b>Anne Arundel County</b>			
Wholesale Service (all Units)	\$2.147	\$2.360	\$2.594
<b>Carroll County</b>			
Raw Water (all Units)	\$0.761	\$0.836	\$0.919

It is also proposed that Anne Arundel County water retail rates be increased as follows:

<b>Anne Arundel County - Water Retail Service</b>				
<b>Quarterly Use Block</b>	<b>Current Rate</b>	<b>Fiscal 2017</b>	<b>Fiscal 2018</b>	<b>Fiscal 2019</b>
First 50 Units	\$4.775	\$5.248	\$5.768	\$6.339
Next 450 Units	\$2.789	\$3.065	\$3.368	\$3.701
Over 500 Units	\$1.915	\$2.105	\$2.313	\$2.542

If adopted, the proposed rates will be effective on October 11, 2016, July 1, 2017, and July 1, 2018. Increased cost of water and sewer service will be passed on to Baltimore County through the City-County Agreements. Baltimore County establishes its own water rates with City concurrence.

Senior Citizen Discount:

It is recommended that eligible senior citizen consumers 65 and older in Baltimore City who apply and whose annual household income does not exceed \$30,000.00 receive a 43% discount on the total water and sewer volumetric charges. The annual household income threshold will be annually adjusted for inflation by using the Consumer Price Index (CPI) for the Washington-Baltimore area as published by the Bureau of Labor statistics as

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of May of each year. This is a continuation of the program already provided by the City.

Low Income Water Assistance Program:

It is recommended that the annual credit amount of the Low Income Assistance Program be increased from \$179.00 to \$197.00 for eligible citizens meeting the low income criteria. This is an enhancement of the program already provided by the City.

Miscellaneous Fees:

In addition to the changes to the water and sewer user charges, the City has evaluated the charges for miscellaneous services and it is recommended that miscellaneous water fees be updated and approved as follows (list of miscellaneous charges and current and proposed are shown on the next page). If adopted, the proposed miscellaneous fees will be effective on October 11, 2016, July 1, 2017, and July 1, 2018.

<b>Miscellaneous Fees</b>				
<b>Fee Type</b>	<b>Current Fees</b>	<b>Proposed October 11, 2016</b>	<b>Proposed July 1, 2017</b>	<b>Proposed July 1, 2018</b>
Fire Hydrant Permit	\$175	\$180	\$185	\$191
Fire Flow Test	\$750	\$773	\$796	\$820
Fire Protection Fee	\$150	\$156	\$162	\$168
Meter Testing - 2" and Below	\$100	\$103	\$106	\$109
Meter Testing - Above 2"	\$100	\$103	\$106	\$109
Delinquent Turn-Off	\$95	\$98	\$101	\$104
Turn-Off - Request by Owner (small meter)	\$95	\$98	\$101	\$104
Turn-On - Request by Owner (small meter)	\$95	\$98	\$101	\$104
Turn-Off - Large Meter - Above 2"	\$150	\$155	\$160	\$165
Turn-On - Large Meter - Above 2"	\$150	\$155	\$160	\$165
Abandonment - 1" and Below	\$380	\$391	\$403	\$415
Abandonment - 1 1/2" and 2"	\$655	\$675	\$695	\$716
Reduce 3/4" meter to 5/8" meter	\$175	\$180	\$185	\$191
Reduce 1" meter to 3/4" meter	\$240	\$247	\$254	\$262
Reduce 1" meter to 5/8" meter	\$240	\$247	\$254	\$262
Reduce 2" meter to 1 1/2" meter	\$1,140	\$1,174	\$1,209	\$1,245
Tampering Fee (1st Offense)	N/A	\$100	\$103	\$106
Tampering Fee ( After 1st Offense)	N/A	\$500	\$515	\$530
Access to Asset	N/A	\$100	\$103	\$106

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Department of Audits - Audit Report and Related Audit Digest

The Board is requested to **NOTE** receipt of the following Audit Report and Related Audit Digest:

1. Review of Water and Wastewater Utility Proposed Water and Sewer Rate Increases including Proposed Rate Structure Changes Effective October 11, 2016, July 1, 2017 and July 1, 2018.

The Department of Audits has reviewed the methodology and procedures used to determine the proposed water and sewer rate increases, including the proposed changes to the water and sewer rate structures, and documentation submitted for Board approval by the Department of Public Works (DPW) and the Director of Finance for fiscal years 2017, 2018 and 2019. The proposed water rate increases are 9.9% and the sewer rate increases are 9%, for each of the three fiscal years. If adopted, the effective dates of the proposed rate increases are anticipated to be October 11, 2016, July 1, 2017 and July 1, 2018, with the existing rates remaining in place until then. The purpose of the review was to determine whether DPW's methodology and procedures used to determine the rate increases, including the proposed changes to the water and sewer rate structures, were reasonable and whether the applicable computations were accurate.

As required by the December 1978 Charter Amendment, the City Council adopted Ordinance 941 which established, among other things, a mechanism for the determination of rates and charges for water and wastewater services. Ordinance 941 requires that the City's Water and Wastewater Utility Funds (Utilities) establish rates or adjust rates to make the Utilities self-supporting. Ordinance 941 also requires that the rates be established at a level sufficient to recover any accumulated deficit from prior years. Additionally, the Utilities must comply with revenue bond covenants that cover the utility rates. The City must also comply with Federal and State mandates and a Consent Decree to address past and periodic discharges and wet overflows from the City's Wastewater collection system.

The Utilities utilized the services of a utility financial consultant for various tasks, including rate setting and financial consulting services. The financial consultant developed a comprehensive financial planning model to serve as a

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key tool for the long-term health and integrity of the Utilities and reviewed the Utilities' operating expenses, existing and proposed debt requirements, and capital expenditures to determine the need for the rate increases to the water and sewer user charges for fiscal years 2017, 2018, and 2019. The projected revenue requirements and proposed rate increases are based upon expected operating expenses, capital improvement projects, sources of funds, and legal covenant requirements. The last rate increases occurred in July 2013, when water and sewer rates were each increased by 15% for fiscal year 2014 and 11% for fiscal years 2015 and 2016.

**Senior Citizen Discount and Low Income Water Assistance Program**

As part of the proposed rate increase request submitted to the Board of Estimates, DPW and the Department of Finance are recommending that eligible senior citizen consumers, ages 65 and older, in Baltimore City who apply, and whose annual household income does not exceed \$30,000.00 receive a 43% discount on the total water and sewer volumetric charges. The discount, however, does not apply to the newly proposed Fixed Component Fees (Account Management Fee and Infrastructure Charges). The annual household income threshold will be adjusted each year for inflation by using the Consumer Price Index (CPI) for the Washington-Baltimore area as published by the Bureau of Labor Statistics as of May of each year. This is a continuation of the program already provided by the City.

The proposed rate increase also includes a recommendation to increase the annual credit amount for the low income assistance program from \$179.00 to \$197.00 (10%) for eligible Baltimore City citizens meeting the low income criteria. This is an enhancement of the program already provided by the City.

**CONCLUSION**

Based on the Department of Audits review of the methodology and procedures used to determine the proposed rate increases, including the proposed changes to the water and sewer rate structures, the Department of Audits believe that the proposed water and sewer rate increases for fiscal years 2017, 2018, and 2019 are reasonable in order for the Utilities to be self-sustaining and to meet the reserve and debt service requirements. The Department of Audits comments and recommendations are submitted in the report.