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**Date:** 2022-02-09

**From:** Steven Dollmaier, Director of Operations and Samantha Buchanan, Treasurer

**Subject:** 2022 Water Rates

**Report:** OPS 2022-09

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## Recommendation

That staff report OPS2022-09 entitled “2022 Water Rates” be received for information purposes; and

That the new water rates be enacted, effective May 1, 2022, for the July 2022 water bill circulation, thus allowing for adequate time for notifying residents; and

That a by-law to establish 2022 Water Rates, be presented at the February 16, 2022, meeting of Council.

## Background

At the July 14, 2021, Committee of the Whole, Council approved report OPS2021-31 – Drinking Water System (DWS) Financial Plan and recommendation COW2021-074. Through approval of said recommendation, Committee directed staff to schedule a public meeting with the users of the East Linton, Shallow Lake and Pottawatomi water systems, regarding the proposed changes, as outlined in the DWS Financial Plan, and report back to Council following the public meeting on next steps. The first public meeting was held on November 3, 2021, and the second public meeting was held on December 15, 2021.

## Analysis

The Township of Georgian Bluffs (Township) retained Ontario Clean Water Agency (OCWA) to provide a Financial Plan for the Township’s Drinking Water Systems (DWS) to comply with the Financial Plan regulation (O. Reg. 453/07) made under the Safe Drinking Water Act. At the public meeting held on December 15, 2021, Township staff presented to Council and members of the public outlining the proposed water system rates for each of the East Linton, Shallow Lake and Pottawatomi Water Systems.

Further to said presentation, an analysis of the financial impacts this change would have to the Township is outlined below.

### **Users Water Consumption**

For all water systems, moving to the proposed rates would remove the previous daily usage threshold and shift to a consumption-based model, in which all water consumed by a user would be charged at \$3.43 per cubic metre (m3).

Since 2017 the total water consumption of each water system has been gradually increasing. For 2020 and 2021 staff recognize that COVID would be a contributing factor to this increase in consumption, as many individuals were encouraged to travel less and work from home where possible. Below is an analysis of the total annual water consumption for each water system in cubic metres.

<b>Water System</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
East Linton	65,990	72,266	74,235	84,234	89,534
Shallow Lake	27,634	27,841	28,356	29,503	29,519
Pottawatomi	4,419	4,757	5,113	5,770	5,478
Oxenden	19,497	20,264	19,037	20,357	22,174
<b>All Water Systems</b>	<b>117,540</b>	<b>125,128</b>	<b>126,741</b>	<b>139,864</b>	<b>146,705</b>

In addition to COVID contributing to the increase in water consumption, excluding the Pottawatomi water system, there has been an increase in the number of connected and unconnected users.

<b>Water System</b>	<b>Jan 2017 – Number of Users</b>	<b>Dec 2021 – Number of Users</b>	<b>Increase in Number of Users</b>
East Linton	472	610	138
Shallow Lake	203	205	2
Pottawatomi	25	25	NIL
Oxenden	224	248	24
<b>All Water Systems</b>	<b>924</b>	<b>1,088</b>	<b>164</b>

The increase in both consumption and users also indirectly increases the costs associated with annual system maintenance, repairs and maintenance and capital

expenditures. Essentially, with more users on a water system, the greater the strain to the system infrastructure.

### Billing Methodology

To summarize the presentation made to Council and the public on December 15, 2021, below is a comparison of the current billing methodology to the proposed new methodology. The revenue impact of enacting the new billing methodology on various effective dates has also been included:

- 1) January 1, 2022 – to be implemented on the March 2022 water bills
- 2) March 1, 2022 – to be implemented on the May 2022 water bills
- 3) May 1, 2022 – to be implemented on the July 2022 water bills

**Note:** as explained below, an implementation date of May 1, 2022 is recommended.

### East Linton Water System

	Current Billings	Proposed Billings
Daily usage threshold	0.50 m3	N/A
Operating rate	Base - \$ 1.52 per billing day	\$ 3.43 per m3 used
	Usage (excess of daily threshold) - \$ 3.03 per m3	
Reserve rate	Base - \$ 0.37 per billing day	\$ 0.69 per billing day
	Usage (excess of daily threshold) - \$ 0.76 per m3	

Using the 2021 total annual consumption and the proposed billing methodology the 2022 estimated revenue is as follows:

	Enacted January 1, 2022	Enacted March 1, 2022	Enacted May 1, 2022
Current billings			
Operating rate	NIL	\$ 54,920	\$ 116,676
Reserve rate	NIL	14,055	30,051
Proposed billings			
Consumption	307,102	255,918	204,734

	Base	153,629	128,795	103,121
<b>Total Revenue</b>		<b>\$ 460,731</b>	<b>\$ 453,688</b>	<b>\$ 454,582</b>
<b>Additional (Lost) revenue if not enacted on Jan 1, 2022</b>		<b>NA</b>	<b>\$ (7,043)</b>	<b>\$ (6,149)</b>

### Shallow Lake Water System

	Current Billings	Proposed Billings
Daily usage threshold	0.50 m3	N/A
Operating rate	Base - \$ 3.60 per billing day	\$ 3.43 per m3 used
	Usage (excess of daily threshold) - \$ 7.18 per m3	
Reserve rate	Base - \$ 0.89 per billing day	\$ 2.61 per billing day
	Usage (excess of daily threshold) - \$ 1.79 per m3	

Using the 2021 total annual consumption and the proposed billing methodology the 2022 estimated revenue is as follows:

	Enacted January 1, 2022	Enacted March 1, 2022	Enacted May 1, 2022
Current billings			
Operating rate	NIL	\$ 47,748	\$ 101,133
Reserve rate	NIL	12,007	25,418
Proposed billings			
Consumption	101,250	84,375	67,500
Base	195,293	163,725	131,087
<b>Total Revenue</b>	<b>\$ 296,543</b>	<b>\$ 307,855</b>	<b>\$ 325,138</b>
<b>Additional (Lost) revenue if not enacted on Jan 1, 2022</b>	<b>NA</b>	<b>\$ 11,312</b>	<b>\$ 28,595</b>

## Pottawatommi Water System

The proposed billing analysis below follows that of the “Phased In” approach which was presented on December 15, 2021. This is an increase of 15.1%, over that of the 2021 water rates, opposed to the required increase of 117.5%.

	Current Billings	Proposed Billings
Daily usage threshold	0.75 m3	N/A
Operating rate	Base - \$ 4.57 per billing day	\$ 3.43 per m3 used
	Usage (excess of daily threshold) - \$ 9.12 per m3	
Reserve rate	Base - \$ 1.13 per billing day	\$ 4.40 per billing day
	Usage (excess of daily threshold) - \$ 2.28 per m3	

Using the 2021 total annual consumption and the proposed billing methodology the 2022 estimated revenue is as follows:

	Enacted January 1, 2022	Enacted March 1, 2022	Enacted May 1, 2022
Current billings			
Operating rate	NIL	\$ 6,709	\$ 14,388
Reserve rate	NIL	1,659	3,560
Proposed billings			
Consumption	18,790	15,658	12,526
Base	40,150	33,660	26,950
<b>Total Revenue</b>	<b>\$ 58,940</b>	<b>\$ 57,686</b>	<b>\$ 57,424</b>
<b>Additional (Lost) revenue if not enacted on Jan 1, 2022</b>	<b>NA</b>	<b>\$ (1,254)</b>	<b>\$ (1,516)</b>

**Oxenden Water System** – Analysis includes only the Georgian Bluffs portion of revenue

	<b>Current Billings</b>	<b>Proposed Billings</b>
Daily usage threshold	NA	N/A
Operating rate	Base - \$ 1.06 per billing day	\$ 3.43 per m3 used
	Usage - \$ N/A per m3	
Reserve rate	Base - \$ 0.38 per billing day	\$ 1.44 per billing day
	Usage - \$ N/A per m3	

Using the 2021 total annual consumption and the proposed billing methodology the 2022 estimated revenue is as follows:

	Enacted January 1, 2022	Enacted March 1, 2022	Enacted May 1, 2022
Current billings			
Operating rate	NIL	\$ 12,730	\$ 27,280
Reserve rate	NIL	4,917	10,785
Proposed billings			
Consumption	76,057	63,381	50,705
Base	130,349	109,279	87,494
<b>Total Revenue</b>	<b>\$ 206,406</b>	<b>\$ 190,307</b>	<b>\$ 176,264</b>
<b>Additional (Lost) revenue if not enacted on Jan 1, 2022</b>	<b>NA</b>	<b>\$ (16,099)</b>	<b>\$ (30,142)</b>

Depending on when the new billing methodology is enacted, it would have the following affects on the annual surplus (deficit) of each water system. 2022 budgeted revenue includes consumption, base, bulk sales of water, connection fees and other miscellaneous revenue earned on each water system.

The surplus (deficit) is calculated as: Revenue less Expenses less Capital. For the Oxenden Water System this analysis is only including the Georgian Bluffs portion of revenues.

<b>Enacted January 1, 2022</b>	<b>East Linton Water System</b>	<b>Shallow Lake Water System</b>	<b>Pottawatomi Water System</b>	<b>Oxenden Water System</b>
Revenue	\$ 498,250	\$ 297,000	\$ 59,000	\$ 206,500
Expenses	240,250	222,000	84,400	62,250
Capital	210,000	130,000	25,000	2,000
<b>Surplus (Deficit)</b>	<b>\$ 48,000</b>	<b>\$ (55,000)</b>	<b>\$ (50,400)</b>	<b>\$ 142,250</b>

<b>Enacted March 1, 2022</b>	<b>East Linton Water System</b>	<b>Shallow Lake Water System</b>	<b>Pottawatomi Water System</b>	<b>Oxenden Water System</b>
Revenue	\$ 491,250	\$ 308,000	\$ 58,000	\$ 190,300
Expenses	240,250	222,000	84,400	62,250
Capital	210,000	130,000	25,000	2,000
<b>Surplus (Deficit)</b>	<b>\$ 41,000</b>	<b>\$ (44,000)</b>	<b>\$ (51,400)</b>	<b>\$ 126,050</b>

Per staff's recommendation, the figure below details implementation of the new billing methodology on May 1, 2022:

<b>Enacted May 1, 2022</b>	<b>East Linton Water System</b>	<b>Shallow Lake Water System</b>	<b>Pottawatomi Water System</b>	<b>Oxenden Water System</b>
Revenue	\$ 492,100	\$ 325,500	\$ 57,500	\$ 176,250
Expenses	240,250	222,000	84,400	62,250
Capital	210,000	130,000	25,000	2,000
<b>Surplus (Deficit)</b>	<b>\$ 41,850</b>	<b>\$ (26,500)</b>	<b>\$ (51,900)</b>	<b>\$ 112,000</b>

The deficit for the Shallow Lake water system is due to a large dollar value of capital projects required at the facility in 2022. For clarity, the system will not continue to operate in a deficit moving forward. Funds that are set aside in the Shallow Lake Water System reserve will be used to fund this deficit.

For the Pottawatomi water system, staff are proposing to use the "Phased In" approach, therefore, the system will continue to operate in a deficit pending equilibrium. Assuming annual increases are applied as required, it is expected that this system will operate in a

surplus effective 2027 and thus contributing to the Water System reserve. If the “Phased In” approach was not implemented for the 2022 year and the water system user experienced the full increase of 117.5%, over that of the 2021 water rates, this water system would have a 2022 surplus of \$ 2,300 (Revenue - \$111,700; Expenses - \$ 84,400; Capital - \$25,000) and would continue to operate in a surplus going forward.

Staff are recommending that the new billing rates be enacted effective May 1, 2022, therefore reflecting the new billing methodology on July 2022 water bills. By waiting until May 1, 2022 to enact the new rates, adequate notification of the change can be provided water users.

### **Analysis of Water System Historical Capital Costs**

The Township water systems range in year of construction from 1987 to 1996, putting the original infrastructure at 34 to 25 years in use. As the age of infrastructure increases it is anticipated that there will be more costly, major repairs required to the water infrastructure.

Below is an analysis of each water system’s costs incurred for the original construction and any major upgrades completed since. Also included is an estimated cost to do that same work in today’s dollars using the Bank of Canada’s inflation rates, as of December 2021 (2022 inflation rates are not available at this time). The amounts shown below do not include any annual repairs and maintenance that have been undertaken at each water system.

#### **East Linton Water System**

<b>Year of Capital Asset</b>	<b>Costs Incurred in that Year</b>	<b>Inflation Rate</b>	<b>Estimated Cost in Today’s Dollar</b>
1993 – Original Construction	\$ 5,703,208	1.6709	\$ 9,529,490
2008 – Upgrades	3,868,355	1.2638	4,888,828
2010 – Upgrades	631,757	1.2272	775,292
2016 – Upgrades	104,790	1.1213	117,501
2018 – Upgrades	264,740	1.0801	285,946
2020 – Upgrades	69,934	1.0472	66,952
<b>Total Costs</b>	<b>\$ 10,636,784</b>		<b>\$ 15,664,008</b>



### Shallow Lake Water System

Year of Capital Asset	Costs Incurred in that Year	Inflation Rate	Estimated Cost in Today's Dollar
1996 – Original Construction	\$ 4,378,285	1.6076	\$ 7,038,530
2010 – Upgrades	576,053	1.2272	706,933
2015 – Upgrades	73,719	1.1345	83,635
2020 – Upgrades	210,782	1.0472	220,731
<b>Total Costs</b>	<b>\$ 5,238,839</b>		<b>\$ 8,049,829</b>

### Pottawatomi Water System

Year of Capital Asset	Costs Incurred in that Year	Inflation Rate	Estimated Cost in Today's Dollar
1987 – Original Construction	\$ 222,887	2.0748	\$ 462,446
2005 – Upgrades	41,500	1.3389	55,564
2008 – Upgrades	36,858	1.2638	46,581
<b>Total Costs</b>	<b>\$ 301,245</b>		<b>\$ 564,591</b>

### Oxenden Water System

Year of Capital Asset	Costs Incurred in that Year	Inflation Rate	Estimated Cost in Today's Dollar
1996 – Original Construction	\$ 2,659,271	1.6076	\$ 4,275,044

Each water system has their own reserve, and those funds are set aside for that specific water system i.e., funds set aside in the East Linton Water System reserve would not be used for any capital projects completed on the Shallow Lake Water System.

When comparing the estimated costs to re-build each water system in today's dollar to the reserve balances held for each system, each water system does not have sufficient funds available. As required by legislation, water systems must be self-funded, meaning they are funded only from those residents who are on the water system and not from the municipal tax levy. If a re-build or major repair were required to one of the water systems, the Township would either need to fund the project through grants (which are not always guaranteed or available), by having the current water system users paying for their portion of the repair immediately or by taking out a bank loan, which would then

be repaid annually, using the consumption component of revenue earned from that water system. Below is an analysis of the unaudited 2021 water reverse balances for each system compared to the estimated cost to re-build that water system today.

	<b>East Linton</b>	<b>Shallow Lake</b>	<b>Pottawatomi</b>	<b>Oxenden</b>
Unaudited 2021 reserve funds	\$ 1,741,292	\$ 1,255,248	\$ 70,354	\$ 619,940
Estimated cost to re-build	\$ 15,664,008	\$ 8,049,829	\$ 564,591	\$ 4,275,044
Reserve deficit	\$ <b>(13,922,716)</b>	\$ <b>(6,794,581)</b>	\$ <b>(494,237)</b>	\$ <b>(3,655,104)</b>

### Financial Impact

The annual financial impacts of the change in water system billing methodology depends on the date which Council wishes to enact the new rates, as discussed above.

By changing to the new billing methodology, this will ensure that the Township will have sufficient reserves available to fund any major capital repairs or improvements that would be required to the water system infrastructure going forward.

### Strategic Priorities

#### Demonstrate and Enhance Environmental Stewardship

The Township of Georgian Bluffs strives to become a leader in Environmental Stewardship by reducing energy consumption, reducing solid waste, increasing diversion rates of recyclable materials, and lessening the environmental impact of existing and future infrastructure through innovation and upgrading.

#### 3.3 Manage drinking and storm water.

- (a) Operate drinking water systems to maintain a high standard of public health and safety, protect the environment and ensure long term sustainability.
- (b) Investigate opportunities to extend water service to supply areas in need of potable water and increase users to ensure water system are sustainable and economical.
- (c) Re-evaluate the current water billing model to ensure a fair equitable system that recognizes payment for all water used to promote water conservation.

## Conclusion

To allow for adequate time to notifying water system users, staff are recommending that Committee support implementation of the new billing methodology, effective May 1, 2022, thereby new rates being reflected on users July 2022 water bills.

## Supporting Documentation

Attachment A: 2021 Presentation – Water Rates

Attachment B: Revised Water System Financial Plan

Respectfully Submitted:     Steven Dollmaier, Director of Operations  
   Samantha Buchanan, Treasurer

## Report Approval Details

Document Title:	OPS 2022-09 - Water Rates Update.docx
Attachments:	<ul style="list-style-type: none"><li>- 2021 Presentation - Water Rates.pdf</li><li>- Revised Water System Financial Plan.pdf</li></ul>
Final Approval Date:	Feb 4, 2022

This report and all of its attachments were approved and signed as outlined below:

Jenn Burnett, Senior Planner

Brittany Drury, Director of Corporate Services/Clerk

Cynthia Fletcher, Chief Administrative Officer