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STAFF REPORT: **Finance and IT Services**

REPORT TO:	**Finance and Administration**
MEETING DATE:	**October 16, 2012**
REPORT NO.:	**FIT.12.44**
SUBJECT:	**Water and Wastewater Rate Review**
PREPARED BY:	**Ruth Prince, Manager of Revenue**

A. Recommendations

THAT Council receive Staff Report FIT.12.44 "Water and Wastewater Rate Review" for information purposes; and,

THAT Council direct staff to proceed to the Budget Process with the existing rate structure, using the Infrastructure Renewal Fixed Charge plus 5m^3, and an increasing tiered consumption rate.

B. Background

In 2007, The Blue Mountains implemented "metered" water and wastewater billings. Over the last 5 years, the water and wastewater rate structure has been modified but a full rate review had not been completed.

With the completion and adoption of a "20 year Capital Plan – Water Division" in April, 2011 and the comments received from the public as part of the 2012 Budget Process, staff felt it was important to review the current water and wastewater rates and to inform Council of the various rate structure options.

Any proposed changes to the water and wastewater rates would be included in the 2013 budget process.

Current Water/Wastewater Rate Structure

The Town of The Blue Mountains operates and maintains municipal water and wastewater systems. These systems service approximately 6000 water customers and 4800 wastewater customers. The water and wastewater systems are 100% funded through user fees (water and wastewater) and do not rely on municipal tax support. The current fee structure includes a monthly fixed rate that includes 5 m^3 (varies by meter connection size) and an increasing tiered consumption rate.

Water Consumption and Customer Information

	2007	2008	2009	2010	2011	5 Year Average
Billing Consumption m^3	1,086,554	1,020,159	1,004,027	1,047,013	1,023,045	1,036,160
# of Accounts	5683	5717	5811	5943	6023	

Consumption has declined approximately 5% since 2007. Clearly, the progressive tier rate structure is promoting water conservation, a goal of the Town's Sustainable Path.

Currently water rates are being set using 1,109,895 m^3 in annual consumption. If the downward consumption trend continues to occur and adjustments are not made in the calculation of rates, the Town will continue to experience revenue shortfalls. It should also be noted that the number of accounts has increased approximately 6% since 2007. So, there are more users using less water.

Goals and Objectives for the Town's Rate Structure

As part of the water and wastewater rate review, staff considered the following guiding principles:

Sustainability – Staff report FIS.11.11 "20 Year Capital Plan – Water Division" adopted by Council in April 2011, outlined the 20 year Capital Plan for the Town's water supply system and confirmed the commitment to eliminate the water infrastructure gap and achieve sustainability of the system in the years to come.

Affordability – Support affordable water and wastewater services for all customers while, at the same time ensuring that the full cost of service is being recovered.

Fair and Equitable – The rate structure should ensure that consumers are contributing equitably in proportion to the cost of the systems they are responsible for.

Revenue Stability – Revenue is typically stabilized by assigning a higher fixed cost as part of the rate structure. This goal must be balanced with the need for conservation.

Conservation – Encourage the efficient use of water as well as managing system demand. Provide programs that promote water efficiency (water restrictions) that may reduce operating costs and capital investment needs over time.

Practical – A rate structure that is simple to understand, rational and easy to update and administer.

Rate Structure Options

Approximately 70% of Ontario municipalities use a two part rate structure. Two key decisions need to be established in a water and wastewater rate review:

- What type of consumption rate structure should be used?

- What costs should be recovered from the consumption rate and what costs should be recovered from the fixed rate?

The extent of costs that are recovered from the fixed and consumption charge varies across municipalities based on their goals and objectives. For example, where conservation is a high priority, the costs recovered from the fixed rate tend to be lower. An increase in the allocation of costs to be recovered from the fixed rate recognizes the fact that the majority of costs to operate water and wastewater systems are fixed and do not vary by the volume consumed. The proceeding looks at some options for consumption and fixed rates

Consumption Rate Options

Throughout Ontario, the use of rate structures for consumption varies among municipalities. The use of a particular rate structure can depend upon numerous factors, including Council preference, economic/demographic conditions and administrative.

Below are the four consumption rate structures that are widely used by municipalities:

Uniform Rate	The consumer pays the same price per unit consumed, regardless of the volume. This is generally accepted as the most equitable approach.
Pro	A unit of water costs the same to supply no matter who consumes it and it is not impacted by ability to pay. Larger families are not paying higher per unit costs for water consumed.
	The customer's bill will vary directly related to the amount of water consumed and they are in direct control over the total amount used.

Increasing or Inverted Tiered Rates	The per unit rates in an increasing tiered rate structure increases as consumption increases. This is the current rate structure that the Town utilizes.
Pro	This is the most effective pricing method for encouraging conservation as the price per unit increases as consumption grows.
Con	May penalize legitimate high volume users that due to the nature of the business they use large volumes of water even though they are practicing conservation methods

Declining Tiered Rates	The per unit price of water decreases as the volume used increases. This structure charges low volume customers the highest rate
Pro	Favourable to industrial users
Con	Does not support conservation

Humpback Rate	The tiers initially increase like an increasing tier structure, but then decrease beyond a certain consumption level as a decreasing tiered rate
Pro	Reduces the cost for high volume and low volume users.
	Industry friendly
Con	This is the most complex to administer

Fixed Monthly Rate Options

The current fixed charge recovers 51% of budget expenses and 49% is recovered from the consumption rate. The existing practice is to increase the fixed rate and the consumption rate by the same percentage increase (i.e. 5% in 2012). The percentage of both is arbitrary and not tied to cost behaviour.

The Canadian Water Works Association recommends that a fixed charge be used for costs that are not related to volume consumed but rather attributable to the number and types of customers. There are a number of costs that can be linked directly to a customer in general such as meter replacement/repair, meter reading, billing/collections, customer service, cost of debt service, reserve requirements and capital improvements. These costs could be included in a fixed charge as they do not vary by the amount of water consumed.

Allocation of Budget

The fixed monthly rate is based on an allocation of the water budget. This is the method that The Blue Mountains currently uses. In 2007, when water meters where first installed, the rate structure had 50% of revenue from the fixed monthly charge and 50% of the revenue was from consumption. After 6 months, the rates were revised to 30% of revenue was from the fixed monthly charge and 70% was from consumption. Over a period of time this rate has become skewed based on actual consumption.

Infrastructure Renewal

Staff recommend the fixed monthly rate be or would be calculated to recover the annual lifecycle capital funding requirement. Debt servicing, reserve contributions and capital costs are recovered from the fixed monthly costs as they do not vary by consumption.

Impact Analysis and Scenarios

Various scenarios as shown in Appendix 1 were run to show the impact and help isolate the impact of each decision. Estimated 2013 budget numbers and a 5 year average water consumption (1,036,160 m3) where used to calculate the various scenarios to illustrate examples of the rate options.

Conclusion

The 2011 BMA Municipal Study provides a comparison of the types of rate structures used by municipalities. The table summarizes the results:

Water Rate Structure	
Uniform	66%
Declining	16%
Inclining	11%
Humpback	5%
Flat	2%
Total	**100%**

Sixty two (62) of the 84 municipalities (74%) charge a monthly fixed charge. The extent to which fixed monthly charges as a percentage of the total residential bill varies from a low of 1% to a high of 88%

A survey of rate structures and current rates of surrounding municipalities is attached as Appendix 2

The rate structure examination that has been presented illustrated some interesting models but perhaps none of the options are significantly better than our current system. The current model of a fixed charge and an increasing tiered consumption rate meets the rate objectives of revenue stability, conservation, fair and equitable and is practical in its application. It is however, recommended that the calculation of the fixed charge to recover the annual lifecycle capital funding requirement be implemented with 5 m3 added. Changing the fixed charge calculation to an infrastructure renewal rather than an allocation to budget improves the sustainability objective and provides an opportunity to charge an Infrastructure Renewal Fee to unconnected vacant lots fronting on water and wastewater municipal services if desired.

Recommendation

The current rate structure using the Infrastructure Renewal Fixed Charge, plus 5 m^3 and increasing tiered consumption rate supports the Sustainable Path, provides for revenue stability, conservation and improves sustainability.

Despite recent revenue shortfalls, better estimates of water consumption can be predicted and sustainable rates recommended to Council.

C. The Blue Mountains' Strategic Plan

Addressing the Town's municipal infrastructure needs
Ensuring long-term financial sustainability

D. Environmental Impacts

A goal of The Blue Mountains Sustainable Path is to enhance water conservation strategies.

E. Financial Impact

The water and wastewater rates ensure adequate revenue to sustain the operations and infrastructure.

F. In Consultation With

Robert Cummings, Director of Finance and IT Services
Paula Shannon, Utility Coordinator
Darcy Chapman, Capital Accountant
Renee Ouellette, Financial Accountant
John Caswell, Manager of Water and Wastewater Services/Assistant Director
Troy Speck, CAO

G. Attached

1. Impact of Rate Options
2. Municipal Comparisons

Respectfully submitted,

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WATER RATE OPTIONS - IMPACT ON USERS

CONSUMPTION RATE OPTIONS

	2013 Budget
Consumption Calculation	
Operating Expenditures	$1,872,190
Interfunctional Transfer	$340,055
Non Tangible Capital Asset Capital Expenditures	$25,000
Transfer to Reserves	$35,000
Revenue Requirement	$2,272,245
Less Non-User Rate Revenues	$109,500
Total Expenses to be recovered from Consumption	**$2,162,745**
Estimated Total Annual Water Consumption (m^3):	**1,036,160 m^3**
Total Revenues Through Consumption Rates	**$1,859,023**
Total Revenues Through Fixed Costs	**$1,656,346**
Total 2013 Budget	**$3,515,369**

FIXED PORTION FOR INFRASTRUCTURE RENEWAL RATE OPTION

	2013 Budget				
Cost Related to Infrastructure Replacement					
Debt Repayment	$516,445				
Transfers to Capital	$447,268				
Contribution to Asset Replacement Reserves	$545,356				
Less Development Charge Revenue	-$156,445				
	$1,352,624				
Number of Meters	6,247				
Infrastructure Renewal Cost per Month	$18.04	$3,515,369			
Estimated Number of Meters	**6,247**				
Total Revenues Through Consumption Rates	**$2,032,916**	**$2,162,745**	**$2,162,745**	**$2,162,745**	**$2,162,745**
Total Revenues Through Fixed Costs	**$1,482,453**	**$1,352,624**	**$1,352,624**	**$1,352,624**	**$1,352,624**
Total 2013 Budget	**$3,515,369**	**$3,515,369**	**$3,515,369**	**$3,515,369**	**$3,515,369**

	2012 Current Rates (includes 5 m^3)	Current Model (includes 5 m^3)	Current Based on Infrastructure Renewal (plus 5 m3)	Option #1 Uniform	Option #2 Increasing Tier .15 increments	Option #3 Declining Tier	Option #4 Humpback
		2013 BUDGET					
Fixed Monthly Rate	$ 22.29	$ 25.08	$ 27.02	$ 18.04	$ 18.04	$ 18.04	$ 18.04
Consumption Charge:							
0 - 10 m^3	$ -	$ -	$ -	$ 2.09	$ 1.85	$ 2.43	$ 1.75
>10 - 30 m^3	$ 1.79	$ 1.93	$ 1.80	$ 2.09	$ 2.00	$ 2.19	$ 1.92
>30 - 60 m^3	$ 1.95	$ 2.11	$ 1.96	$ 2.09	$ 2.15	$ 1.97	$ 2.30
>60 - 90 m^3	$ 2.12	$ 2.29	$ 2.13	$ 2.09	$ 2.30	$ 1.77	$ 2.77
above 90 m^3	$ 2.29	$ 2.47	$ 2.30	$ 2.09	$ 2.45	$ 1.60	$ 2.49
0 m3	$ 267	$ 301	$ 324	$ 216	$ 216	$ 216	$ 216
60 m3	$ 267	$ 301	$ 324	$ 342	$ 328	$ 363	$ 321
180 m3	$ 482	$ 533	$ 540	$ 592	$ 550	$ 655	$ 531
11,300 m3	$ 25,855	$ 27,902	$ 26,024	$ 23,800	$ 27,753	$ 18,486	$ 28,246

WASTEWATER RATE OPTIONS - IMPACT ON USERS

CONSUMPTION RATE OPTIONS

	2013 Budget
Consumption Calculation	
Operating Expenditures	$1,274,140
Interfunctional Transfer	$448,184
Non Tangible Capital Asset Capital Expenditures	$30,000
Transfer to Reserves	$0
Revenue Requirement	$1,752,324
Less Non-User Rate Revenues	$215,000
Total Expenses to be recovered from Consumption	**$1,537,324**
Estimated Total Annual Water Consumption (m^3):	**825,264 m^3**

FIXED PORTION FOR INFRASTRUCTURE RENEWAL RATE OPTION

	2013 Budget
Cost Related to Infrastructure Replacement	
Debt Repayment	$571,800
Transfers to Capital	$67,418
Contribution to Asset Replacement Reserves	$807,867
Less Development Charge Revenue	-$571,800
	$875,285
Number of Meters	4,985
Infrastructure Renewal Cost per Month	$14.63
Estimated Number of Meters	**4,985**

Total Revenues Through Consumption Rates	**$1,151,084**	**$1,067,233**	**$1,537,324**	**$1,537,324**	**$1,537,324**	**$1,537,324**
Total Revenues Through Fixed Costs	**$1,261,525**	**$1,345,376**	**$875,285**	**$875,285**	**$875,285**	**$875,285**
Total 2013 Budget	**$2,412,609**	**$2,412,609**	**$2,412,609**	**$2,412,609**	**$2,412,609**	**$2,412,609**

	2012 Current Rates (includes 5 m^3)	2013 BUDGET				
		Current Model (includes 5 m^3)	Current Based on Infrastructure Renewal (plus 5 m3)	Option #1 Uniform	Option #2 Increasing Tier .15 increments	Option #3 Declining Tier	Option #4 Humpback
Fixed Monthly Rate	$ 19.77	$ 21.29	$ 22.48	$ 14.63	$ 14.63	$ 14.63	$ 14.63
Consumption Charge:							
0 - 10 m^3	$ -	$ -	$ -	$ 1.86	$ 1.63	$ 2.17	$ 1.56
>10 - 30 m^3	$ 1.58	$ 1.70	$ 1.57	$ 1.86	$ 1.78	$ 1.96	$ 1.72
>30 - 60 m^3	$ 1.73	$ 1.87	$ 1.73	$ 1.86	$ 1.93	$ 1.76	$ 2.06
>60 - 90 m^3	$ 1.89	$ 2.04	$ 1.89	$ 1.86	$ 2.08	$ 1.58	$ 2.47
above 90 m^3	$ 2.05	$ 2.21	$ 2.04	$ 1.86	$ 2.23	$ 1.43	$ 2.23
0 m3	$ 237	$ 255	$ 270	$ 176	$ 176	$ 176	$ 176
60 m3	$ 237	$ 255	$ 270	$ 287	$ 273	$ 306	$ 269
180 m3	$ 427	$ 459	$ 458	$ 510	$ 487	$ 541	$ 476
11,300 m3	$ 23,136	$ 24,943	$ 23,060	$ 21,194	$ 25,204	$ 16,529	$ 25,286

COMBINED WATER & WASTEWATER RATE STRUCTURE BENCHMARKING

	The Blue Mountains	Meaford	Wasaga Beach	Collingwood	Owen Sound
Type of Rate Structure	Inverted Tier	Uniform	Uniform	Uniform (Seasonal)	Inverted Tier
Combined Water/Wastewater Fixed Monthly Rate	$ 42.06	$ 53.47	$ 26.39	$ 61.68	$ 36.52
Combined Water/Wastewater Consumption					
0 - 10 m^3	Included in Fixed Charge	$ 2.60	$ 1.13	$ 1.42	
>10 - 30 m^3	$ 3.37	$ 2.60	$ 1.13	$ 1.42	
>30 - 60 m^3	$ 3.68	$ 2.60	$ 1.13	$ 1.42	
>60 - 90 m^3	$ 4.01	$ 2.60	$ 1.13	$ 1.42	
above 90 m^3	$ 4.34	$ 2.60	$ 1.13	$ 1.42	
0 - 10 m^3					$ 1.816
>11 - 100 m^3					$ 1.852
>11 - 1,000 m^3					$ 2.048
>1,000 m^3					$ 2.080
> 40 m^3 (May, June, July, Aug, Sept)				$ 1.28	
Annual Consumption					
0 m^3	$ 505	$ 642	$ 317	$ 740	$ 438
60 m^3	$ 505	$ 798	$ 384	$ 825	$ 547
180 m^3	$ 909	$ 954	$ 452	$ 910	$ 769
11,300 m^3	$ 49,170	$ 30,128	$ 13,132	$ 16,211	$ 23,683

WATER RATE STRUCTURE BENCHMARKING

	The Blue Mountains	Meaford	Wasaga Beach	Collingwood	Owen Sound
Type of Rate Structure	Inverted Tier	Uniform	Uniform	Uniform (Seasonal)	Inverted Tier
Water Fixed Monthly Rate	$ 22.29	$ 28.82	$ 12.18	$ 19.37	$ 18.26
Water Consumption					
0 - 10 m^3	Included in Fixed Charge	$ 1.33	$ 0.43	$ 0.58	
>10 - 30 m^3	$ 1.79	$ 1.33	$ 0.43	$ 0.58	
>30 - 60 m^3	$ 1.95	$ 1.33	$ 0.43	$ 0.58	
>60 - 90 m^3	$ 2.12	$ 1.33	$ 0.43	$ 0.58	
above 90 m^3	$ 2.29	$ 1.33	$ 0.43	$ 0.58	
0 - 10 m^3					$ 0.908
>11 - 100 m^3					$ 0.926
>11 - 1,000 m^3					$ 1.024
>1,000 m^3					$ 1.040
> 40 m^3 (May, June, July, Aug, Sept)				$ 0.85	
Annual Consumption					
0 m^3	$ 267	$ 346	$ 146	$ 232	$ 219
60 m^3	$ 267	$ 426	$ 172	$ 267	$ 274
180 m^3	$ 482	$ 505	$ 198	$ 302	$ 385
11,300 m^3	$ 25,855	$ 15,375	$ 5,005	$ 7,995	$ 11,799

WASTEWATER RATE STRUCTURE BENCHMARKING

	The Blue Mountains	Meaford	Wasaga Beach	Collingwood	Owen Sound
Type of Rate Structure	Inverted Tier	Uniform	Uniform	Uniform (Seasonal)	Inverted Tier
Wastewater Fixed Monthly Rate	$ 19.77	$ 24.65	$ 14.21	$ 42.31	$ 18.26
Wastewater Consumption					
0 - 10 m^3	Included in Fixed Charge	$ 1.27	$ 0.70	$ 0.84	
>10 - 30 m^3	$ 1.58	$ 1.27	$ 0.70	$ 0.84	
>30 - 60 m^3	$ 1.73	$ 1.27	$ 0.70	$ 0.84	
>60 - 90 m^3	$ 1.89	$ 1.27	$ 0.70	$ 0.84	
above 90 m^3	$ 2.05	$ 1.27	$ 0.70	$ 0.84	
0 - 10 m^3					$ 0.908
>11 - 100 m^3					$ 0.926
>11 - 1,000 m^3					$ 1.024
>1,000 m^3					$ 1.040
> 40 m^3				$ 0.43	
(May, June, July, Aug, Sept)					
Annual Consumption					
0 m^3	$ 237	$ 296	$ 171	$ 508	$ 219
60 m^3	$ 237	$ 372	$ 213	$ 558	$ 274
180 m^3	$ 427	$ 448	$ 255	$ 609	$ 385
11,300 m^3	$ 23,136	$ 14,647	$ 8,081	$ 8,158	$ 11,799