

Town of Wasaga Beach Water and Wastewater Rate Study

Overview Presentation

July 27, 2010

Watson & Associates Economists Ltd

Study Purpose

- ❑ Identify all current and future water and wastewater system capital needs
- ❑ Identify cost recovery options for capital
- ❑ Estimate future operating costs over next 10 years
- ❑ Recommend new rates to recover the cost of the water and wastewater systems

Areas of Discussion

- ❑ Legislation for Water/Wastewater
- ❑ Consumption and Forecast
- ❑ Capital Needs and Financing
- ❑ Lifecycle Costs (Existing Infrastructure)
- ❑ Operating Expenditures
- ❑ Rates
- ❑ Policy Matters
- ❑ Next Steps

New Legislation - Sustainable Water and Sewage Systems Act (SWSSA)

- ❑ Legislation given first reading on Dec. 12, 2001 (Bill 155)
- ❑ Given Royal Assent December 13, 2002
- ❑ Bill not implemented as of yet pending finalizations of regulations
- ❑ Emerging “interim” legislation may supersede these requirements for the medium term

Legislation Requiring Financial Plans to be Undertaken

Interim Legislation was adopted to implement much of the Sustainable Water & Sewer Systems Act (SWSSA).

A brief summary of key elements of Regulation 453/07 is provided below:

- ❑ The financial plan will represent one of the five key elements for obtaining your Municipal Drinking-Water License
- ❑ The plan is to be completed July 1, 2010 (may be later if Drinking water license is to be obtained later than this)
- ❑ The financial plans shall be for a period of a least six years but longer planning horizons are encouraged
- ❑ As the regulation is under the Drinking Water Act, the preparation of the plan is mandatory for water and encouraged for wastewater

Interim Legislation

- ❑ The plan is considered a living document but will need to be undertaken at a minimum every five years
- ❑ The plans are generally consistent with the "Watson" Approach in forecasting the capital, operating and reserve fund positions, providing detailed inventories, forecasting future volumes and calculation of the rates.
- ❑ The additional requirements include the PSAB information for each year of the forecast (i.e. total non-financial assets, tangible capital assets acquisitions, tangible capital asset construction, betterments, write downs, disposals, total liabilities and net debt)
- ❑ The financial plans must be made available upon request to the public (without charge) and on the municipality's web site. The availability of this information must also be advertised

Bill 13 (formerly Bill 237) Sustainable Water and Waste Water Systems Improvement and Maintenance Act

- ❑ Private members Bill (Bill 237) was given first reading on December 9, 2009 and a second reading February 18, 2010.
- ❑ Bill 237, put forth by David Caplan died on the order paper after the second reading was carried due to the prorogation of the Ontario Legislature.
- ❑ The Sustainable Water and Wastewater Systems Improvement and Maintenance Act was reintroduced as Bill 13 and given its first reading on March 23rd.
- ❑ Proposes to repeal and replace the *Sustainable Water and Sewage Systems Act*

Bill 13 Sustainable Water and Waste Water Systems Improvement and Maintenance Act

Proposed Elements of Act:

- ❑ ensures that the public ownership of water and wastewater systems is maintained.
- ❑ establishes the “Ontario Water Board” as an agent of the province. The duties of the Water Board are to review and approve business plans, provide quality management certification, monitor and approve charges imposed for water and wastewater services, ensure reporting to the public on systems is undertaken and informing the Minister with respect to the above matters.
- ❑ require regulated entities below 10,000 customers to evaluate the potential to amalgamate with other entities.

Bill 13 Sustainable Water and Waste Water Systems Improvement and Maintenance Act

Proposed Elements of Act (cont'd):

- regulated entities will be required to prepare Business Plans for their water and wastewater services. The Business Plan must contain a governance model, financial model, accountability model, inventory and management plan for infrastructure, assessment of full cost of providing the service and revenue obtained to provide the service and a description as to how the regulated entity intends to pay the full cost of providing the service.
- the Business Plan shall also specify that full metering of customers will be used as a source of revenue subject to any prescribed exceptions.

Bill 72 – Water Opportunities Act

- Introduced May 18, 2010 by the Minister of the Environment
- Act proposes to:
 - Foster Innovative Water, Wastewater and Stormwater technologies
 - Prepare Water Conservation Plans to attain water conservation targets to be established by regulations
 - Prepare Sustainability Plans for Water, Wastewater and Stormwater Services

Bill 72 – Water Opportunities Act

- In regard to the Sustainability Plans:
- The Bill extends from the Water financial plans and requires a more detailed review of the Water financial plan and requires a full plan for Wastewater and Stormwater services
- Regulations will provide performance targets for each service – these target may vary based on the jurisdiction of the regulated entity or the class of entity

Bill 72 – Water Opportunities Act

- The Financial Plan shall include:
 - An asset management plan
 - Financial Plan
 - For water, a water conservation plan
 - Assessment of risks which may interfere with the future delivery of the service and a plan to deal with the risks
 - Strategies for maintaining and improving the municipal service to ensure future demand can be satisfied, consider technologies to improve the service and potential increased co-operation with other municipal service providers

Bill 72 – Water Opportunities Act

- Performance indicators will be established by service
 - May relate to the financing, operation and/or maintenance of a service or to any other matter which may be included in the plan
 - May be different for different service providers or for different areas of the province
- Regulations will prescribe:
 - Timing
 - Contents of the plans
 - Identifying what portions of the plan will require certification
 - Public consultation process
 - Limitations, updates, refinements, etc.

Present Water and Wastewater Rate Structure

Town of Wasaga Beach			
2010 - Water Billing Rates			
Base Charge			
Service Size		Residential	Non-Residential
¾"	19 mm	\$12.00	\$12.00
1"	25 mm	\$12.00	\$16.80
1 ½"	40 mm	\$21.60	\$21.60
2"	50 mm	\$34.81	\$34.81
2 ½"	63 mm	\$84.04	\$84.04
3"	75 mm	\$129.48	\$129.48
4"	100 mm	\$168.07	\$168.07
6" and over	150 mm	\$252.11	\$252.11
Volume Charge			
\$ 0.420	per m ³		
Flat Rate (without a water meter)			
\$ 737.04	Residential - annually		

Town of Wasaga Beach			
2010 - Wastewater Billing Rates			
Base Charge			
Service Size		Residential	Non-Residential
¾"	19 mm	\$14.00	\$14.00
1"	25 mm	\$14.00	\$19.60
1 ½"	40 mm	\$25.20	\$25.20
2"	50 mm	\$40.61	\$40.61
2 ½"	63 mm	\$98.04	\$98.04
3"	75 mm	\$151.05	\$151.05
4"	100 mm	\$196.08	\$196.08
6" and over	150 mm	\$294.12	\$294.12
Volume Charge			
\$ 0.690	per m ³		
Flat Rate (without a water meter)			
\$ 870.00	Residential - annually		

Forecast Users and Billable Volumes

- We have assumed an average of 230 m³ per customer for existing and future flows.
- This average is based upon:
(Treated flows less 15% unaccounted water loss ÷ customers)
- This amount is lower than the prior study assumption (270 m³) as 2009 had lower treated flows

Customer Profile - Existing

Water

Meter Size		Residential	Commercial	Total
¾"	19 mm	8,401	231	8,632
1"	25 mm	45	5	50
1 ½"	40 mm	15	158	173
2"	50 mm	5	57	62
2 ½"	63 mm			-
3"	75 mm			-
4"	100 mm		4	4
6" and over	150 mm		21	21
Flat Rate Customers		261	46	307
Total		8,727	522	9,249

Wastewater

Meter Size		Residential	Commercial	Total
¾"	19 mm	7,946	195	8,141
1"	25 mm	43	5	48
1 ½"	40 mm	15	156	171
2"	50 mm	5	56	61
2 ½"	63 mm		-	-
3"	75 mm		-	-
4"	100 mm		4	4
6" and over	150 mm		20	20
Flat Rate Customers		237	34	271
Total		8,246	470	8,716

Capital Infrastructure

- Capital needs were developed with Town Staff
- Works identified based on 2010 - 2019 capital budget, review of capital infrastructure replacement
- Capital works were identified by
 - Need
 - Timing
 - Costs

Capital System Needs – 2010-2019 – (inflated \$)

Water

Description	Total	Timing
<u>Capital Expenditures</u>		
Jenetta Water Supply 4th Well Commissioning	\$904,000	2011-2012
Klondike Pk Rd / Powerline Rd Trunk Watermain	242,000	2019
Public Works - Miscellaneous Studies	215,000	2010
Hwy 26 & Airport Rd Sewer & Trunk Watermain	1,977,000	2013-2015
New Water Well Plant / Expansion	4,500,000	2012-2016
Hwy 26 West Trunk Watermain	1,008,000	2015-2016
West End Water Storage Reservoir	5,596,000	2015-2018
Knox Rd E Area Forcemain & Watermain River Crossings	666,000	2010-2011
Knox Rd East Area Sewer and Water	1,516,000	2010-2011
Bay Colony Area Sewer and Water Phase 2	1,288,000	2010-2011
Sunnidale Rd Water Tower No. 2 - Painting	258,000	2011
OCWA Capital	70,000	2010
Contract 10/15	1,000	2010
Knox Rd West Area Sewer and Watermain	557,000	2010-2013
Robinson Rd Area Servicing	3,157,000	2011-2015
Joanne Crescent	301,000	2018
Sunward Estates Area Servicing	2,025,000	2017-2019
Bay Sands Dr Area Servicing	134,000	2019
Total Capital Expenditures	\$24,415,000	

Capital System Needs – 2010-2019 – (inflated \$)

Wastewater

Description	Total	Timing
Capital Expenditures		
Sewage Collection System Model & Report	\$46,000	2015
Hwy 26 & Airport Rd Sewer & Trunk Watermain	1,619,000	2013-2015
Knox Rd E Area Forcemain & Watermain River Crossings	666,000	2010-2011
Knox Rd East Area Sewer and Water	3,029,000	2010-2011
Bay Colony Area Sewer and Water Phase 2	2,612,000	2010-2011
OCWA Capital	139,000	2010
Contract 10/15	2,000	2010
Knox Rd East Area Sewage Pump Station	2,722,000	2010-2011
Knox Rd West Area Sewer and Watermain	1,670,000	2010-2013
Bell's Park Rd Area Sewer	1,613,000	2012-2014
Robinson Rd Area Servicing	6,408,000	2011-2015
Ramblewood Dr - San Sewer & Reinstatement	591,000	2017
Joanne Crescent	610,000	2018
Sunward Estates Area Servicing	4,115,000	2017-2019
Bay Sands Dr Area Servicing	273,000	2019
Inventory Replacement		
Water Pollution Control Plants	707,000	2019
Total Capital Expenditures	\$26,822,000	

Capital Financing Options

- ✓ Development Charges
- ✓ Reserves
- ✓ Operating Budget Transfers
- ✓ Debt
- ❑ Grants
- ❑ Local Improvements
- ❑ Municipal Act (Part 12)

Proposed Capital Financing Programs (inflated \$)

Description	Water	Wastewater
Capital Financing		
Development Charges	\$2,262,000	\$0
Growth Related Debenture Requirements	\$11,867,000	\$3,171,000
Operating Contributions (Benefitting Owners)	\$8,644,000	\$22,639,000
Reserves and Reserve Funds	\$1,642,000	\$1,012,000
Total Capital Financing	\$24,415,000	\$26,822,000

Note: DC Revenue to fund growth related debt may not be adequate to fully fund annual debt charges. Consideration should be given to either slowing the timing of calculation of these works or to negotiate developer financial assistance.

Lifecycle Infrastructure Costs

- ❑ Water and Wastewater infrastructure dates back to the 1950's.
- ❑ Total value of Town owned existing water infrastructure is \$73.6 million
- ❑ Total value of Town owned existing wastewater infrastructure is \$121.0 million

Lifecycle Infrastructure Costs (2010\$)

Area	Total Replacement Value	Amount to be funded in 10 year forecast	Net Total Replacement	Annual Lifecycle Replacement
Water				
Water Treatment Plants (Well Supply)	\$4,606,407	\$0	\$4,606,407	\$307,563
Elevated Water Tanks	\$5,604,803	\$0	\$5,604,803	\$331,418
Watermains	\$63,359,384	\$0	\$63,359,384	\$1,199,666
Total Water	\$73,570,594	\$0	\$73,570,594	\$1,838,647
Wastewater				
Water Pollution Control Plants	\$19,485,160	\$541,867	\$18,943,293	\$1,110,097
Sewage Pumping Stations	\$13,394,822	\$0	\$13,394,822	\$446,633
Sanitary Sewer Forcemains	\$6,258,182	\$0	\$6,258,182	\$122,894
Sanitary Sewers	\$81,888,673	\$0	\$81,888,673	\$1,519,698
Total Wastewater	\$121,026,837	\$541,867	\$120,484,970	\$3,199,321
Total	\$194,597,431	\$541,867	\$194,055,564	\$5,037,968

Investment per customer	
Water	\$7,357
Wastewater	\$12,678
Total Investment per Customer	\$20,035

Lifecycle Reserves

- ❑ Lifecycle contributions for each service have been rationalized.
- ❑ There are no water infrastructure replacements coming due within the 10 year forecast period.
- ❑ Wastewater infrastructure replacements coming due within the 10 year forecast amount to approximately \$542,000.
- ❑ Transfers to reserve funds have been provided to begin phasing in the funds required for future needs.
- ❑ Forecast has ensured that the rates attain “financial sustainability” by the end of the forecast period)

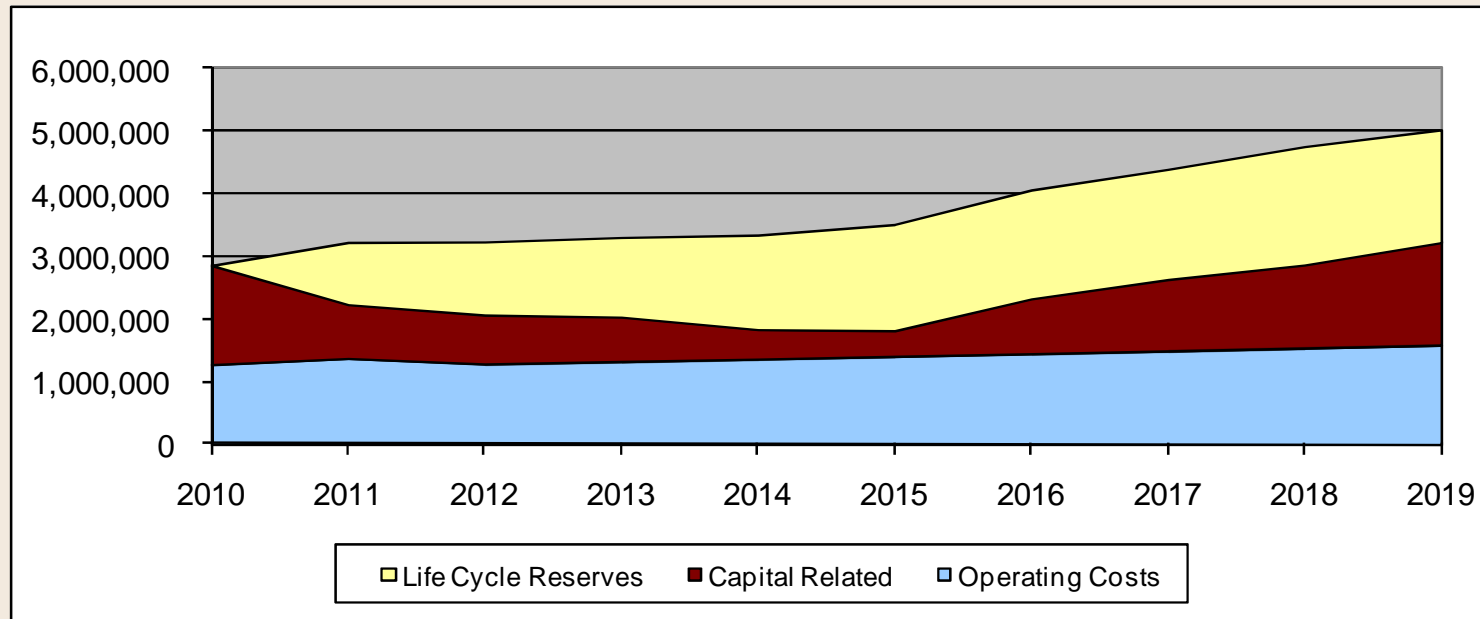
Operating Budgets

- Operating expenditures are increasing over the forecast to recognize:
 - inflationary impacts
 - Need to monitor possible additional requirements associated with Licensing process and possible refinements to legislative changes

Operating Budget – Water Overview of Components

Item	Inflation	Other
Staff Wages & benefits	3%	
Office	3%	
Utilities, Water & Wastewater, Hydro	3%	
Water Material	3%	
Motor Vehicle Costs	3%	
Provincial Park Contribution		2010 Final Year
Miscellaneous	3%	
Legal and Engineering	3%	
OCWA Operating	3%	
Water/Sewer Annual Capacity Reports	3%	
Water/Wastewater Study		2010 Only
Water Well Development Study		2011 Only
Vehicle & Equipment Lease/Rental	3%	
Provision for Uncollectible Water	3%	
Memberships, Professional Development	3%	
Drinking Water Licencing	3%	
Advertisements	3%	
Insurance	3%	
Seasonal LL Write Off	3%	
Water Meter Expenses	3%	

Water Operating Budget – Impact on Future Budgets

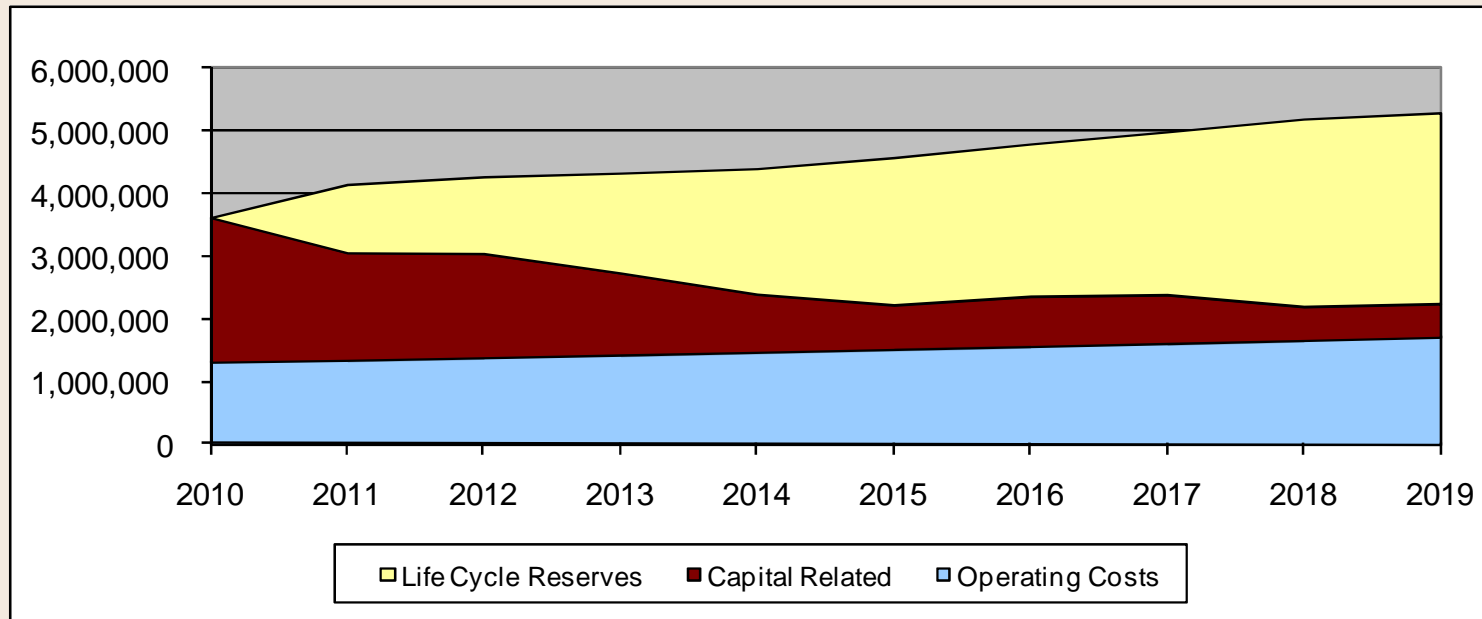


Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Operating Costs	1,287,630	1,384,309	1,297,088	1,336,001	1,376,081	1,417,363	1,459,884	1,503,681	1,548,791	1,595,255
Capital Related	1,583,730	861,515	783,436	711,011	471,854	413,894	877,991	1,143,871	1,330,661	1,640,564
Life Cycle Reserves	0	991,752	1,165,874	1,271,026	1,507,515	1,693,837	1,736,458	1,756,298	1,886,772	1,797,957
Total	2,871,360	3,237,576	3,246,398	3,318,038	3,355,450	3,525,094	4,074,333	4,403,849	4,766,224	5,033,776

Operating Budget – Wastewater Overview of Components

Item	Inflation	Other
Staff Wages & benefits	3%	
Office	3%	
Utilities, Water & Wastewater, Hydro	3%	
Sewer Material	3%	
Motor Vehicle Costs	3%	
Meal Allowance	3%	
Miscellaneous	3%	
Telephone	3%	
Legal & Engineering	3%	
OCWA Operating	3%	
OCWA Operating Extras	3%	
PILs payments	3%	
Water/Wastewater Study	0%	2010
Travel	3%	
Vehicle & Equipment Lease	3%	
Professional Development	3%	
Advertisements	3%	
Insurance	3%	
Insurance Claims	3%	
Provision for Uncollectible - Sewer	0%	
Seasonal LL Write Off	3%	

Wastewater Operating Budget – Impact on Future Budgets



Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Operating Costs	1,333,750	1,363,463	1,404,366	1,446,497	1,489,892	1,534,589	1,580,627	1,628,046	1,676,887	1,727,194
Capital Related	2,301,720	1,707,878	1,654,802	1,300,081	917,365	703,134	794,823	772,802	531,878	531,878
Life Cycle Reserves	0	1,097,650	1,233,008	1,604,305	2,016,495	2,363,799	2,443,753	2,613,794	3,011,343	3,061,697
Total	3,635,470	4,168,990	4,292,177	4,350,884	4,423,753	4,601,521	4,819,202	5,014,642	5,220,108	5,320,768

Water Rate Forecast

Annual Customer Water Bill – Based on 230 m³ of usage and ¾" meter

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Monthly Base Rate	\$12.00	\$12.36	\$12.73	\$13.11	\$13.50	\$13.91	\$14.33	\$14.33	\$14.33	\$14.33
Constant Rate	\$0.42	\$0.43	\$0.44	\$0.45	\$0.46	\$0.47	\$0.48	\$0.48	\$0.48	\$0.48
Annual Base Rate	\$144.00	\$148.32	\$152.76	\$157.32	\$162.00	\$166.92	\$171.96	\$171.96	\$171.96	\$171.96
Annual Consumption Rate	\$96.60	\$98.90	\$101.20	\$103.50	\$105.80	\$108.10	\$110.40	\$110.40	\$110.40	\$110.40
Total Annual Bill	\$240.60	\$247.22	\$253.96	\$260.82	\$267.80	\$275.02	\$282.36	\$282.36	\$282.36	\$282.36
% Increase		3%	3%	3%	3%	3%	3%	0%	0%	0%

Wastewater Rate Forecast

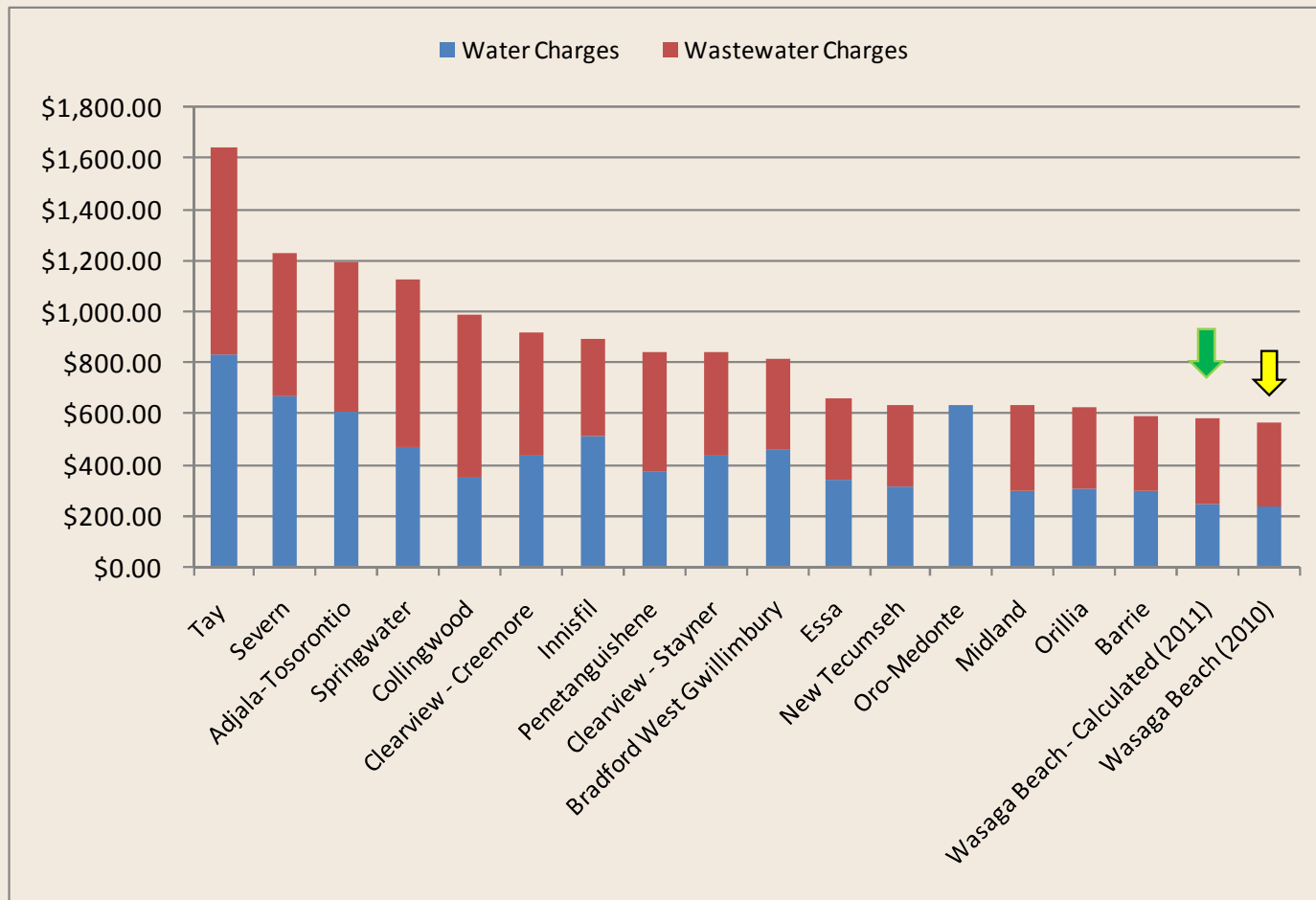
Annual Customer Wastewater Bill – Based on 230 m³ of usage and ¾" meter

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Monthly Base Rate	\$14.00	\$14.42	\$14.85	\$15.30	\$15.76	\$16.23	\$16.72	\$17.22	\$17.74	\$18.27
Constant Rate	\$0.69	\$0.71	\$0.73	\$0.75	\$0.77	\$0.79	\$0.81	\$0.83	\$0.85	\$0.88
Annual Base Rate	\$168.00	\$173.04	\$178.20	\$183.60	\$189.12	\$194.76	\$200.64	\$206.64	\$212.88	\$219.24
Annual Consumption Rate	\$158.70	\$163.30	\$167.90	\$172.50	\$177.10	\$181.70	\$186.30	\$190.90	\$195.50	\$202.40
Total Annual Bill	\$326.70	\$336.34	\$346.10	\$356.10	\$366.22	\$376.46	\$386.94	\$397.54	\$408.38	\$421.64
% Increase		3%	3%	3%	3%	3%	3%	3%	3%	3%

Water/Wastewater Bill Comparison Based on 230 m³ annual usage

Rank	Municipality	Water Charges	Wastewater Charges	Total Charges
1	Tay	\$833.00	\$809.00	\$1,642.00
2	Severn	\$667.08	\$565.00	\$1,232.08
3	Adjala-Tosorontio	\$609.00	\$588.00	\$1,197.00
4	Springwater	\$473.11	\$647.72	\$1,120.83
5	Collingwood	\$350.84	\$636.01	\$986.85
6	Clearview - Creemore	\$434.50	\$481.43	\$915.93
7	Innisfil	\$515.14	\$379.24	\$894.38
8	Clearview - Stayner	\$434.50	\$402.35	\$836.85
9	Penetanguishene	\$370.36	\$466.32	\$836.68
10	Bradford West Gwillimbury	\$463.28	\$346.94	\$810.22
11	Essa	\$339.48	\$322.51	\$661.99
12	Oro-Medonte	\$637.04	\$0.00	\$637.04
13	New Tecumseh	\$317.40	\$317.40	\$634.80
14	Midland	\$298.98	\$331.63	\$630.61
15	Orillia	\$302.26	\$318.36	\$620.62
16	Barrie	\$292.89	\$294.76	\$587.65
17	Wasaga Beach - Calculated (2011)	\$247.22	\$336.34	\$583.56
18	Wasaga Beach (2010)	\$240.60	\$326.70	\$567.30

Water and Wastewater Bill Comparison Based on 230 m³ annual usage



Alternate Rate Structure Scenarios

- ❑ Staff requested two alternate scenarios for Council's review and consideration.
- ❑ Scenario 1 - Lifestyle Community Units (i.e. One unit is equal to one customer) will be charged a rate of $\frac{3}{4}$ " meter per unit.
- ❑ Scenario 2 – Summer reduction for Wastewater Rates – Wastewater rates are reduced by 25% May to August

Water Rate Forecasts - Scenario 1 (Lifestyle Community Units)

Water Rate Summary - With Lifestyle Community Units

Annual Customer Wastewater Bill - Based on 230 m³ of useage and ¾" meter

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Monthly Base Rate	\$12.00	\$12.36	\$12.73	\$13.11	\$13.50	\$13.91	\$14.33	\$14.33	\$14.33	\$14.33
Constant Rate	\$0.42	\$0.34	\$0.35	\$0.36	\$0.37	\$0.38	\$0.38	\$0.39	\$0.39	\$0.39
Annual Base Rate	\$144.00	\$148.32	\$152.76	\$157.32	\$162.00	\$166.92	\$171.96	\$171.96	\$171.96	\$171.96
Annual Consumption Rate	\$96.60	\$78.20	\$80.50	\$82.80	\$85.10	\$87.40	\$87.40	\$89.70	\$89.70	\$89.70
Total Annual Bill	\$240.60	\$226.52	\$233.26	\$240.12	\$247.10	\$254.32	\$259.36	\$261.66	\$261.66	\$261.66

Wastewater Rate Forecast – Scenario 1 (Lifestyle Community Units)

Wastewater Rate Summary - With Lifestyle Community Units

Annual Customer Wastewater Bill - Based on 230 m³ of useage and ¾" meter

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Monthly Base Rate	\$14.00	\$14.42	\$14.85	\$15.30	\$15.76	\$16.23	\$16.72	\$17.22	\$17.74	\$18.27
Constant Rate	\$0.69	\$0.60	\$0.62	\$0.63	\$0.65	\$0.67	\$0.69	\$0.71	\$0.73	\$0.76
Annual Base Rate	\$168.00	\$173.04	\$178.20	\$183.60	\$189.12	\$194.76	\$200.64	\$206.64	\$212.88	\$219.24
Annual Consumption Rate	\$158.70	\$138.00	\$142.60	\$144.90	\$149.50	\$154.10	\$158.70	\$163.30	\$167.90	\$174.80
Total Annual Bill	\$326.70	\$311.04	\$320.80	\$328.50	\$338.62	\$348.86	\$359.34	\$369.94	\$380.78	\$394.04

Wastewater Rate Forecast – Scenario 2 (Summer Reduction)

Wastewater Rate Summary - with Summer Reduction

Annual Customer Wastewater Bill - Based on 230 m³ of usage and ¾" meter

Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Monthly Base Rate	\$14.00	\$14.42	\$14.85	\$15.30	\$15.76	\$16.23	\$16.72	\$17.22	\$17.74	\$18.27
Constant Rate	\$0.69	\$0.83	\$0.86	\$0.88	\$0.90	\$0.93	\$0.95	\$0.97	\$0.99	\$1.01
Reduced Summer Rate	\$0.69	\$0.62	\$0.65	\$0.66	\$0.68	\$0.70	\$0.71	\$0.73	\$0.74	\$0.76
Annual Base Rate	\$168.00	\$173.04	\$178.20	\$183.60	\$189.12	\$194.76	\$200.64	\$206.64	\$212.88	\$219.24
Consumption - Regular	\$105.80	\$127.27	\$131.87	\$134.93	\$138.00	\$142.60	\$145.67	\$148.73	\$151.80	\$154.87
Consumption - Reduced	\$52.90	\$47.53	\$49.83	\$50.60	\$52.13	\$53.67	\$54.43	\$55.97	\$56.73	\$58.27
Annual Consumption Rate	\$158.70	\$174.80	\$181.70	\$185.53	\$190.13	\$196.27	\$200.10	\$204.70	\$208.53	\$213.13
Total Annual Bill	\$326.70	\$347.84	\$359.90	\$369.13	\$379.25	\$391.03	\$400.74	\$411.34	\$421.41	\$432.37

Matters for Council's Consideration

1. Consider the capital program
2. Consider the operating program
3. Consider phase in of lifecycle reserve contributions
4. Consider the proposed water and wastewater base charge and volume rates