

Submission to City of Ottawa Environment Committee

2013 and 2014 Water and Waste Water Budgets



**Submitted by Bill Toms
Principal at ENTRANS Policy Research Ltd
Former Member of Environmental Advisory Committee
February 19, 2013**

Summary of Recommendations

The Environment Committee should consider the following suggestions in the context of the Water Rate Budgets for 2013 and 2014:

- Revisit analytical work done in 2009 and the public consultations in 2010 so as to bring in a new more equitable, more financially and environmentally sensitive water rate structure for 2014
 - Introduce a fixed component and a volume component possibly with rising block rates and/or with a proxy distance charge to reflect higher costs of maintaining and replacing installed infrastructure
 - Undertake a further review in 2013 of the rate structure including possible time-of-day water pricing to encourage water conservation during peak demand periods by larger volume commercial and industrial users
 - Consider the introduction of selective incentives for rain barrels and green space retention by mid-2013 to support water conservation by residential consumers in selected areas with CSO issues
- Review and where appropriate, reduce existing administrative charges and examine all water billing systems for increased efficiencies
- Return the Fire Supply Charge to property tax bill since it primarily functions as an insurance fee rather than a user fee
- Consider a governance change by creating a new Water, Waste Water and Solid Waste Commission with citizen membership using the model the Transit Commission and learning from the lessons of this experiment

Introduction and Purpose

This submission repeats some of the suggestions raised in previous Environmental Advisory Committee submissions during both the 2011 and 2012 City of Ottawa Water Budgets. It suggests several additional actions that could be explored to improve the effective and efficient delivery of both water and waste water services in both the next two years and beyond.

It discusses possible improvements in the water rate structure by considering some of the proposals raised during public consultations in 2010 but subsequently deferred by the previous Council. This deferral now appears to have been further extended due to the need for the full completion of the installation of new metering equipment.

This document also proposes other possible changes to obtain more effective public input through the creation of a new Water & Waste Commission, the new Environmental Stewardship Committee and more informal involvement of citizens with expertise and interest in these issues.

It also suggests the need to improve and integrate the current billing systems for water and all residential waste services, including curbside waste in order to more effectively apply principles of Environmental Price Reform.

Proposed Water Rate Increases

Rate increases in the 2013 and 2014 Water Budgets are accepted by many people as being a necessary step. The pitch line that is being repeated suggests it is “pay-me-now or pay-me-more-later” situation and it seems to have become a convincing slogan for many residents¹.

Residential customers have generally become very water aware and per capita water consumption has been declining. There has always been comfort in knowing that the residents of Ottawa still pay relatively less than other cities for the delivery of very high quality drinking water. Nevertheless water rates are now scheduled to increase at 7% per year which is well above general rate of inflation over the next few years. It is also well above the indexed pensions provided by the government to vulnerable seniors in this community. This fact accelerates the need for reform of the water rate structure in the city to make it more financially sustainable. This reform should ensure that water is recognized as a vital commodity that needs to be priced properly to ensure its longer term sustainability.

Water rates should not become a burden on those at the lowest income levels. The cumulative impacts of these proposed increases in water rates, combined with rising hydro rates, transit fares increases and growing property taxes they will affect the ability of vulnerable segments of the population to participate in the life of the community. While the rising costs of many of these services may be beyond the ability of the municipality to control, it is important to ensure that cumulative impacts be recognized, and where possible, work cooperatively with other levels of government to help find solutions.

¹ FRAM oil filters used this type of advertising slogan in their commercials for many years.

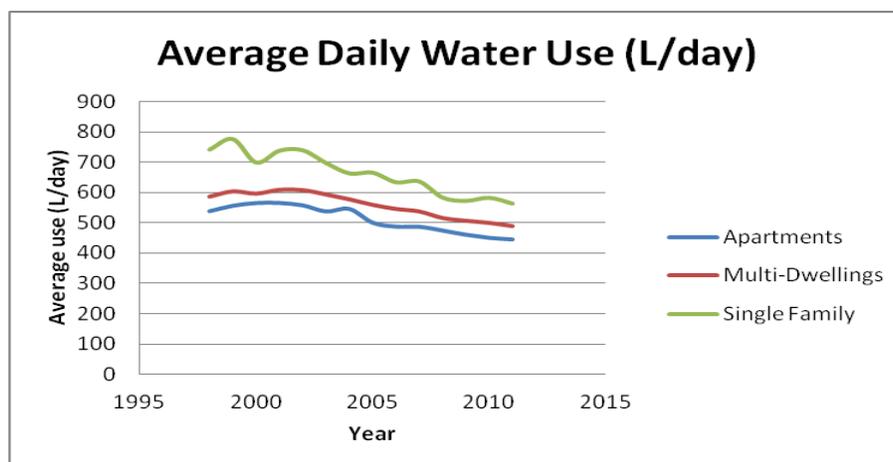
This Water Budget continues with the theme of obtaining greater co-ordination between road repair and the replacement of underground water and waste water assets. This is simple common sense and was frankly long overdue. Better monitoring of underground assets to ensure a more timely replacement of key pieces of our aging network of pipes is also an excellent initiative. Using new technology to monitor water loss and to inspect pipes from the inside are very useful initiatives. The expressions such as “a stitch in time saves nine” and “an ounce of prevention is worth a pound of cure” are old maxims. Having safe drinking water and properly treating waste is an essential service critical to the health and well being of all residents. We owe it to future generations not to dump untreated waste into the beautiful Ottawa River. New technology can be expensive and new standards are being imposed to ensure that our water footprint is being reduced. It all costs money. While the public seems quite willing to pay to ensure that service is provided, they need regular reassurances that it is being well managed.

Rate Structures: The Unfinished Reform in Ottawa

The proper pricing of water is an important element for achieving both environmental and economic objectives, commonly referred to as “Environmental Price Reform (EPR)”. A basic principle of EPR is that the price charged for drinking water should reflect the full environmental costs associated with its initial treatment, transportation to the consumer and the final treatment and disposal of any waste water. A second principle is that the price should be properly allocated not only between different categories of users and but over generations as well. It is inappropriate that future generations will have to pay for the failure of this generation to both maintain basic water infrastructure and to properly treat the waste water it generates. While Ottawa is generally a leader compared to most municipalities in Ontario, there is room for improvement and consistency with the principles of EPR.

Residents in this City have done their part in reducing their consumption of water on a “per capita” basis. (Note that “per capita” really means *per unit* and single family homes will generally have more individuals than an average sized apartment or multi-dwelling unit).

The following graph shows the laudable progress that has been made, especially in single family units. This decline is due to a number of factors. Price is certainly important because consumers are financially rewarded by consuming less water and higher water rates mean that there is an even greater incentive to their reduce consumption. The use of newer water saving toilets, shower heads and appliances are part of the picture.



The City of Ottawa initiated public consultation sessions in late 2009 on alternative rate structures for both drinking water and waste water treatment. The information provided to City Staff through its consultant(s) was useful background for residents of Ottawa in understanding this important policy issue. (See Annex 1 for a memo in 2009 from Raftelis, a consulting firm located in North Carolina that was hired to advise City staff)

The proposed change the water rate structure was motivated partly by the desire to have a more environmentally sustainable system and at the same time better stabilize revenues. Water revenues in Ottawa fell during 2009 due to a number of factors, including enhanced water conservation efforts by consumers. These conservation efforts were in part a natural consumer response to increases in water rates. In 2010, however, the opposite was observed with the water account being in a surplus position due to higher water use, primarily driven by growth in the number of consuming units and usage in the business and commercial sectors. In 2011, there was a deficit because consumers and businesses have been able to implement many water saving strategies, partly in response to the higher rates put in place in 2011. The 2012 account was in deficit again. As pointed out in the budget documents this year: “over 93 per cent of annual revenues are attributable to the volumetric charge of the Water and Sewer Bill”. This fact means the City is at risk with its annual forecasts if there are no changes to the current rate structure.

The original consultations initiated by previous Council asserted that there was no hidden agenda to raise water revenues. The options for changes to the rate structure that were examined would have been generally revenue neutral for most water users. The preferred rate structure proposed by City Staff during the public consultations had both a base charge and a volumetric charge. The base charge would have been based on the size of the service and was expected to raise about 25% of the monthly charge. The remaining 75% would have been based on actual volumes of water consumed. The current fire supply charge was discussed briefly during the consultations although no changes to its structure or incidence was proposed (i.e. it would continue to be part of the base since it was based on the size of service).

This is now old technology?



The City has undertaken an ambitious program to replace all current water meters with modern more sophisticated meters that will have many operational and environmental benefits. The cost of these meters was apparently not allocated to class of residential user. An argument could be advanced that some residential consumers were therefore subsidizing other users. Was there an argument to support a differential allocation of the cost of new water meters in proportion to the size of service being provided? By way of contrast: the OPA instructed Hydro Ottawa to ensure that all its customers were

treated differently depending on the size/cost of the new smart meters being installed rather than simply allocating the costs equally over all customers of this utility. Hydro Ottawa complied with this request.

The program to replace water meters has taken longer than originally expected with about 20,000 still not completed. However the majority of residential homes now have their new equipment properly installed, connected and operating. It is time to begin the next phase for these homes so that residents can benefit from have better self-monitoring of their own personal water consumption now. They should not have to wait until the rollout has been fully completed to begin to get benefits. Perhaps we could start with some small test areas within a single Ward to ensure there are no “Presto-like” surprises waiting in developing reporting systems for residents? An earlier start might allow Apps to be designed to allow people to get more current data on water consumption in the same manner as they can now access hydro consumption.

Water and waste water customers are spread out across the municipal area. Drinking water and waste water both have to travel many miles through expensive underground pipes both from the main Britannia intake facility and to the ROPEC for waste water treatment. All customers basically pay the same rates despite the fact that there is a much higher cost of installed pipe to service them. This pipe must be maintained, inspected and replaced on a regular basis. An argument can be made that the fixed cost component in the water and waste water charges should reflect at least some notional charge for this basic economic fact. Those customers who are furthest from the Britannia and ROPEC should be expected to pay somewhat more for the extra cost of the expensive underground infrastructure that is being depreciated each day for their “longer-distance” service.

The new water rate structure should have a simplified distance factor as part of the basic structure. Development charges that are paid by new developments far from the existing water plants seldom factor in the full cost to all system users of adding their new water and waste water services. At most these development charges may pay marginal costs but not contribute to system costs such as any increases in peak load capacity required at Britannia or ROPEC.

As a matter of interest, the City of Ottawa already has a “distance” charge for the delivery of water to the City of Rockland. The treated drinking water that flows to the Rockland is billed in a manner that is apparently at least marginally beneficial to Ottawa water rate payers. It is not clear how the charges for this water will be raised in 2013 and 2014 to cover any increases in costs over the next two years. The City Auditor reviewed the contract when it was originally implemented to determine that there would be no subsidy element borne by Ottawa ratepayers.

Impact of Water Rates on Average Water Consumption

Under the current structure there is only a volumetric charge levied on most consumers. The Sewer Surcharge is for the treatment of waste water at the Robert O. Pickard Environmental Center (ROPEC). The Sewer Surcharge² is currently calculated as 117% of the water charge. In 2013, this

² An argument can be made that this standard 117% surcharge fails to properly distinguish the different **quality** of streams of waste water being sent to ROPEC for processing. For example is the waste being put into the treatment facility from a carwash or a manufacturing plant more costly to treat than normal household sewage? If so this sewage surcharge should be adjusted upwards so that residential water users do not subsidize businesses. The review requested during the 2012 Water Budget briefings by Councillor Qadri led to developing a more consistent set of fees for those specialized waste streams that are being brought or sent and processed at ROPEC.

rate will be held at 117% suggesting perhaps that waste water treatment costs have risen in direct proportion to drinking water costs.

Under the rate structure proposed in 2010 there would have been both a base charge that is unrelated to volume and a volumetric charge. Therefore, at the margin, under the proposed new rate structure there will be less incentive for consumers to undertake new investments in water saving equipment. In a discussion in 2010, Councillors raised concerns about the perceived “unfairness” of customers being charged for water while they had shut off their water connection during winter months to spend a winter vacation in Florida. Hydro Ottawa does not take a vacation from sending out bills to the vacationers even though the consumption is likely much lower. Even when there is zero consumption Hydro One will continue to collect fees from cottagers during the winter months unless the service is totally disconnected and reconnected (for which there is a charge. Such a fees are both normal and justifiable because of the costs associated with them.

Any change to the rate structure may have an impact on average water consumption. The water rate proposals did not consider an increasing block rate structure to provide a financial encouragement to reduce consumption below some minimum monthly amount. An interesting model to consider might be the block rates recently used by Ontario Hydro. Their block rate varied between winter and summer periods. The block rate was meant as an interim measure to encourage the reduction of peak hydro demands. This rudimentary structure developed by Ontario Hydro is now being replaced by a much more sophisticated structure made possible by the installation/activation of “smart meters”.

The City should examine some form of increasing block pricing structure similar to what is currently used by Ontario Hydro to reduce peak demand. An increasing block rate could help encourage water conservation investments at the upper margins to at least the level that now exists with the simple volumetric charge. There is currently no distinction in the rates charged for commercial and residential use of water. Commercial users generally have a greater capacity to undertake water conservation investments. These users should also have a greater incentive to do this and this result could be achieved by increasing block rates for commercial operations.

Impact of Rates on Peak Demand

Any changes to the water rate structure may also affect peak demand. Peak demand is important factor since water capacity has to be sufficient to cover consumer demands which are usually highest in the morning and during the evening meal preparation period. In 2007, city staff indicated that satisfying peak capacity was expected to be a problem and introduced the toilet replacement rebate program as part of a package of efficiency measures to reduce peak demand. There now appears to be somewhat less immediate concern about peak capacity being sufficient to meet peak demand periods, such as for morning showers and evening meal preparations.

There may be relatively little that the average residential water consumer can do to shift water consumption other than perhaps running appliances such as dishwashers and laundry machines at off peak hours. A possible beneficial side impact on water peak demand occurred with the activation of Smart Meters for electricity. Residential customers who shift their electricity usage in clothes and dishwashers away from peak hours also reduce their water use at the same time.

Commercial operations using water may have somewhat greater scope to develop on-site water storage and pressure systems to store water in off-peak periods to be used during peak periods. There is no incentive in either the existing rate structure or in any of the proposals to encourage this type of response.

Another peak occurs not just during times of the day but seasonally. The demand for water by residential customers in summer is usually almost double the demand during winter months. Electricity rates during the summer months are sometimes raised to encourage lower use of air conditioners. Whether higher water rates during summer months might lower peak water demand in summer months or possibly encourage the use of rain barrels is worth exploring. Water demand elasticity may be higher during this peak period.

There was no mechanism in the proposed new rate structure that encouraged either commercial or residential consumers to shift their water consumption from peak to off-peak times. New metering equipment may now raise the possibility of introducing some form of time-of-day pricing for larger commercial and industrial users in Ottawa. This opportunity should be explored.

A Comparison of Fixed and Variable Costs in Ottawa Utility Bills

The current City of Ottawa water bill has three components. The charges for water consumed and the sewer surcharge amount in total to about 90% of a typical monthly bill on a residential home. The FSC (Fire Supply Charge) typically accounts for the remaining 10%.

A typical residential bill for natural gas purchased from Enbridge Gas includes several components elements: a customer charge, a delivery charge, a transportation charge and a gas supply charge. The actual gas supply charge is about 50%. The customer charge is about 10% and described as “a fixed amount charged monthly per meter to help recover a portion of the many fixed costs...to keep the system ready for use at all times”.

A typical bill from Hydro Ottawa has a number of identified charges. The actual electricity charge amounts to about 50% of the monthly bill. Three further categories of monthly charges are identified for delivery cost, debt retirement and regulatory charges. The delivery costs are the largest of these and Hydro Ottawa indicates that “a portion of these charges are fixed and do not change from month to month. Curiously, the debt retirement charges are based on “adjusted consumption”. No information was provided on the allocation of regulatory charges.

An interesting example is the water rate structure in Calgary.³ The Calgary water and sewer billing is handled by ENMAX⁴. There is a flat meter charge plus a volume charge:

In Calgary in 2012 the residential water charge was \$13.65/30 days flat rate for the meter, and \$1.4876 per m³ usage. There is also a charge of \$12.53/30 days flat rate for sewage infrastructure and \$0.7836 per m³ of water. Properties on a well have metered sewage or a formula. The flat rate formula for property is a bit complicated, and is based on lot size plus building size. The sanitary

³ See <http://www.calgary.ca/UEP/Water/Pages/Customer-service/Water-and-wastewater-rates/Water-and-Wastewater-Rates.aspx#2012-2014>

⁴ ENMAX provides electricity, natural gas, fibre-optic, and value-added services. ENMAX, through its subsidiaries and predecessors, has provided Albertans electricity for more than 100 years. It is a wholly owned subsidiary of The City of Calgary, headquartered in Calgary. ENMAX operates and competes in Alberta's restructured electricity industry.

sewer is based on 65.36% of water. Commercial and multi residential, the meter charge ranges from \$13.64/30 days to \$453.50/30 days for the largest (250 mm). Usage starts at \$1.4876 and actually **declines** to \$0.8628/m3 after a certain volume is consumed. Sanitary is \$0.8200/m3 of water. There is a different rate for irrigation uses such as golf courses.

Calgary’s rates for water are also scheduled to rise at about the same percentage rate as in Ottawa while the costs for waste water will rise at about 13 percent per year from 2012-2014.

There are useful examples to be studied in the rate structures of Enbridge Gas, Hydro Ottawa and particularly ENMAX in Calgary for a new water rate structure that includes both a fixed and variable component. These costs also cover the costs of replacing aging transmission and distribution assets.

Other Administrative Issues: A Comparison of Special Charges

There are a variety of administrative charges that are ostensibly designed to ensure that water users bear the full costs of any additional services provided. For example the rates in 2012 are as listed below. It is not clear if these rates will be increased further in 2013 and 2014. The charges on overdue accounts including the issuance of expensive computer-generated “reminder notices” seem quite onerous since these charges are in addition to the 1.25% interest each month.

Opening a new account	\$64.00
Duplicate Bills	\$32.00
Transfer to Tax	\$32.00
Returned Items	\$39.00
Reminder Notice	\$6.15
Payment Distribution	\$31.00

By way of comparison Hydro Ottawa charges for similar account services are much lower and less numerous. Their charges are listed (see <https://secure.hydroottawa.com/moving/moving.aspx>)

Account Setup	\$30.00
Duplicate Bills	\$15.00
Returned Payment	\$15.00

A final comparison has been made with the charges imposed by Enbridge Gas Supply for their special services on residential accounts. Their charges are generally the lowest of those reviewed: (see <https://www.enbridgegas.com/homes/start-stop-move/moving/>)

Opening a new account	\$25.00
Statement of Account	\$10.00
Lawyer Letter Charge	\$15.00
Returned Cheque	\$20.00

In summary, the charges in Ottawa for incidental account services on the water and sewer account appear to be much higher than what is levied by two other local utilities. A comparison with the charges for similar services such as account changes for the Ottawa Municipal Property tax account shows the same \$64 charge for opening a new account even though the water and property tax

accounts appear should be linked. Some real estate lawyers simply send one letter to the City rather than two to change names on both accounts but the new property owner is charged for two separate name changes.

In response to an inquiry City Staff indicated that "...the fees established are set to cover the administrative costs of providing the service. These fees were first established in 2003 when council adopted a user fee policy that directed that any costs that are not provided to all were to be removed from the tax and rate supported budget to that of individual user fees. The ... user fees in Revenue Branch ... help keep both tax and water rates as low as possible."

City staff also indicated several months ago that "... through the Service Ottawa Business Transformation initiative the City is pursuing more on-line services that will remove some of the costs of providing these services. As more services are placed on-line the fees associated with them would also be reduced."

Water utility customers would almost certainly all appreciate further actions to improve efficiency through the reduced cost of on-line services. It may indeed reduce the future cost of doing routine account changes in the City of Ottawa. One has to however recognize that some seniors are not as connected to their electronic communication devices as the 20-50 age group and it hardly seems fair to penalize them with higher service charges.

It might be worth considering whether there would also be merit in moving at least some of the solid waste charges currently on the property tax bill to the water bill system. From an environmental perspective it would also provide greater future flexibility in developing user fees for solid waste collection. In Toronto for example there is a one-time fee for the provision of approved curbside collection containers. In Toronto for example certain charges associated with solid waste charges now appear on the residential water bills. Larger containers cost more than smaller containers. While charges for solid waste would not be allocated to the water budgetary revenues, this would be a convenient way to collect them, possibly at a reduced costs and with a better distribution on those who actually pay for the other utilities on a rented house for example. If the City of Ottawa were to eventually move to a system of "Tag-a-Bag", beyond the already existing Yellow Bag program for small businesses, the regular water bill could a convenient means to both deliver/bill additional tags to households.

The cost of delivering water and treating waste water from a household varies with the volume of service provided. The same principle applies to solid waste curbside collection. Combining the charges for all of these services into a single regular bi-monthly bill rather than an annual bill could help reinforce both water and waste reduction practices at the household level.

A further consideration is that in cases where there are rental accommodations, the landlord often expects the tenant to be responsible for the payment of most utilities which include water, electricity and heat. The tenant therefore has an incentive to be more frugal in the use of these services. The collection of solid waste is a service as well and it is more appropriate that it also be billed to the tenant rather than the landlord in these situations. It is generally conceded that there are more non-compliance problems with solid waste bylaws at rented residences than with owner-occupied homes.

As the City of Ottawa uses more and better targeted economic instruments in the future the current billing systems need to be made more efficient and flexible. Large companies such as Rogers and Bell already provide detailed bills for their many different services that are itemized and include a very broad range of services from wireless and wired phones, internet and cable as well as on-demand movie rentals etc.

The charges for various similar routine account services provided for City of Ottawa on Water Accounts appear to be considerably higher than what are imposed by either Hydro Ottawa or Enbridge.

The City should examine the benefits of putting solid waste and water billing on the same basis with more detailed billing to facilitate the expanded use of economic instruments.



Sewage Treatment Cost Recovery

As noted earlier, the costs of treating sewage is recovered through a “sewer surcharge” that is tied to actual water consumption. This proxy rate has grown from about 50% to its current level of 117%. At lower levels, the distortions that this proxy rate introduces were perhaps more acceptable than at the current levels. The 2012 Budget indicates that proposes to keep this surcharge rate at 117%

The distortions begin the residents who may choose to water their lawns or fill a backyard pool. This resident pays 217% for the actual volume of water that is used, even though none of it is ever actually treated by ROPEC.

Another example is residents who may use rain water or water from the Ottawa River to operate toilets. These residents are effectively getting their sewage water treated for free unless special arrangements are made. Similar anomalies exist for the small numbers of residents who do not have full city services: e.g. residents who have their own wells for drinking water but who use city sewers or residents who use city water but have their own septic tanks.

Special arrangements were apparently developed for the War Museum which uses water from the Ottawa River but whose waste water is treated at ROPEC. Several green condos have adapted to use filtered rain water in toilets including the mixed use building at Holland and Wellington that now houses a new theater. A local builder (Phoenix) was offering “green” homes in Kanata that have an underground cistern where filtered rain water will be stored for use in residential toilets. This will effectively provide the residents with a lower water bill both through reduced water consumption but also much lower charges for the actual waste water services they still use. In fact, the household could actually be delivering more waste water into the system for processing than it purchases from the city. The new Ottawa Convention Center uses a combination of ground water and rain water to

supply their toilets. It would appear that the total waste stream from these toilets is currently being processed for less at ROPEC unless there have been special adjustments made in their billing.

Absent direct metering of services or introducing a new proxy charges for water customers in these circumstances there may not be much that the City can do to address any inequities that these situations can create.

The charges for waste water treatment in these special circumstances need to be sufficiently flexible to reflect the individual circumstances. It may not be appropriate for these users of waste water services to be given a “free or a reduced-price” ride.

Storm Water Drainage Cost Recovery

The appropriate allocation of storm water/drainage costs was an important issue, particularly in the rural areas of the city. While rural residents would like to have greater protection individual property owners do not want to pay for the costs. The 2010 study identified several inequities in the current system of allocating storm water costs. For example, residents who do not have municipal water services bear almost no cost for treatment of storm water.

The study discussed the need to develop alternative measures of costs and benefits, so as to better allocate costs based on land area being drained and other factors such as permeability. The study seemed to have rejected exploring property-based fees, based on an assessment of the impervious area or property size. Such a system would have imposed greater costs on conventional shopping malls which have acres of asphalt for parking. It would have reduced costs for a commercial operation with a green roof or permeable landscaping.

In the end, the study opted for the assessed value of a property as being a good proxy for the allocation of these costs. It suggested the allocation of storm water and drainage costs could be on a city-wide basis or divided into an urban and rural segment.

The urban intensification program for residences and new housing developments in general are contributing factors in removing considerable amounts of urban green space and replacing it with acres of asphalt driveways and rooftops. While green roofs and permeable parking surfaces are occasionally installed, it is the exception rather than the rule.

The City staff during the 2010 review of the water rate structure noted that owners of residential properties who maintained green areas in the form of lawns and/or gardens helped reduce the movement of storm water into the waste water treatment plants. They raised the possibility that these water rate customers should be given some financial recognition of the benefit. The report did not however make any recommendation on exactly how to do this.

During the initial work on the Pinecrest area storm water retrofit City staff noted the benefits of a scenario where a number of the residences would install two rain barrels each to act as a supplementary means of reducing storm water runoff in that area. A small rebate amount could be an effective incentive but it is imperative that the administration costs be minimized. It might help ensure that the estimated \$500,000 or more that the City paid in 2011 to provide about 8000 residents city-wide with rain barrels will continue to earn dividends by encouraging their continued use in 2013 and beyond.

A Storm Water and Rain Barrel Incentive (SWARBI) rebate could be developed for residences in areas of the city that has CSO problems. Ideally, it would be divided into two parts. The first part would be for those residences that have at least one functioning rain barrel in use during 2013 and could be for say \$15. The second part would also be for residences in areas of the city also with CSO problems that have a minimum size lot and maintain a permeable surface of a minimum percent of their total lot size. This second part would be for, say, an additional \$25-\$50. The total rebate would not exceed \$65 per eligible household.

The determination of permeable green space would have to be calculated and reported online by the applicant who would estimate the total size of the residential lot less the amount covered by impermeable surface (i.e. the driveway, garage, residence and any other outbuildings). The minimum lot size for which the \$25 rebate would be paid would be 5000 square feet. In addition the permeable surface area must be at least 50% or 2500 square feet. Information provided by MPAC could be utilized for occasional random audits. MPAC has data on the size of each residential lot as well as the dimension of every residence's footprint for determination of the assessed value for property tax purposes. This information is available to every property owner from MPAC for no charge. Overhead aerial maps are available from online sources if necessary to verify facts. In the event that a random audit suggested that the application for a storm water rebate was invalid then an additional administrative adjustment fee of say \$100 could be applied to the customer's water bill as a form of cost recovery.

The SWARBI rebate could be a low cost means of encouraging residential water consumers to take individual action that will reduce storm water runoff. The parameters of the incentive have been arbitrarily selected to illustrate the concept. City staff should adjust the parameters to make the administration of this program more effective and efficient. Application to receive the rebates should be online only to reduce costs of administration and overhead.

The SWARBI rebate will provide a small positive reinforcement for the continuing use of rain barrels by all citizens, not just those who purchased rain barrels due to the rebate program and who might otherwise stop using them in the summer of 2013. The actual value of the water saved each year using rain barrels is probably an insufficient financial encouragement for most households if they have to pay the full cost of a new rain barrel. This SWARBI rebate incentive, while small may also raise awareness of storm water runoff problems for all residents. The use of 2 rain barrels at 25% of the homes in the Pinecrest watershed area was included in the City Staff proposals. Providing an incentive to maintain or increase green landscaping alternatives wherever feasible that will reduce immediate discharge into storm water catch basins.

It should be apparent that the cost of any SWARBI rebates would of course have to be recovered in the overall rates that are being charged. If effective at a residential level the SWARBI incentive approach might also be extended to commercial operations such as shopping centers and strip malls.

While the approach of allocating at least some storm water costs on assessed property values could be an improvement, there was no proposal put forward in 2010 for a more equitable allocation of storm water and water drainage costs to those parties who contribute proportionately more to the problem associated with CSO overflows.

A small rebate paid annually such as the proposed Storm Water and Rain Barrel Incentive (SWARBI) could be developed for 2013. The rebate would require residents to maintain a rain barrel and/or a specified percentage of their residential lot as a permeable or semi permeable surface in a CSO-prone area.

Concluding Remarks on Rates and Structure Issues

The introduction of a new water rate structure will be a difficult undertaking. Although there is no attempt to raise revenues there will be a concern amongst many residents that there is a hidden agenda. Any public policy that creates both winners and losers, even if they are in equal numbers and only small amounts involved, can become a politically divisive initiative. Change is unsettling to many and this rate structure will be opposed unless at least a portion of the population can be convinced that it represents better public policy. An important consideration is that the incentive to conserve water not be reduced and that the water rates should fully reflect the full environmental costs.

Further staff work be re-launched (possibly through the new Environmental Stewardship Committee or some other forum) no later than mid-2013 with a view to developing a consensus position so that a new rate structure can be put in place in time for consideration in the 2014 Water Rate Budget. There seems to be no reason to defer this discussion until 2015 since the options have already been identified.

The starting point should be a structure with a base charge and a volume sensitive component as originally proposed in 2010.

If there is a new base charge for the water rate introduced this base rate might also be applied to the property tax bill of the owner rather than the tenant.

Charges for many routine account services provided on City of Ottawa Water Accounts appear to be considerably higher than those imposed by either Hydro Ottawa or Enbridge. These charges should be reduced especially when customers are able to use online access to their accounts.

In the medium term the City should examine the benefits of putting solid waste and water billing on the same billing accounts with this more detailed billing designed to facilitate the expanded use of economic instruments.

The City should also review the experience in Calgary with their outsourcing water billing to ENMAX. Another alternative would be to consider the benefits of coordinating water billing with Hydro Ottawa to determine what savings might be realized through merging the billing systems for water and electricity.

Design of Fire Supply Charge

The Fire Supply Charge (FSC) appears on monthly water bills. This charge used to be levied on the property tax bill based on the assessed value of the house. The Fire Supply Charge was moved to the water and sewer bill based on Council direction provided January 25, 2006. A new method of

calculating the levy was introduced. There was a very large one time cost to move the charge from the property tax bill for every household and business to the corresponding water bill.⁵ At least some of this cost may have been attributable to the fact that, in some situations, the property tax bill is paid by the owner whereas the water bill is in many circumstances the responsibility of the tenant. (More on this issue later)

In the 2008 Annual Report of the Office of the Auditor General, there was an audit of the City of Ottawa water rate. Recommendation 7 (on page 239 of the 2008 Annual Report) was "that the City consider recovering the Fire Supply Charge from users based on the value of the assets being protected (i.e. assessed value of the property)". Management apparently agreed with this recommendation but no action on the FSC was recommended in the 2010 water rate discussion paper.

The inclusion of the fire supply charge on water bills that are usually paid by tenants in single family or duplexes should be a concern. The prime beneficiary in the event of fire would be the property owner rather than the tenant and therefore it should be the landlord and not the tenant who should bear this portion of the cost. This would be the case if the FSC was placed on the property tax bill.

A further argument that favours the FSC being charged to the property owner, rather than on the tenant's water bill, is that the insurance premium paid by the owner may be reduced, depending on the nearness of the home to operable fire hydrants.

A final consideration is that those tenants who have to pay for their own water utilities may also be unhappy with the introduction of any form of base charge in their monthly bills. The base charge is independent of the tenant's actual water usage and an argument might be made that this part of the water bill should also be the responsibility of the landlord and not the tenant under an existing lease. That is to say the capital infrastructure to bring the water into the house and to remove waste water should be charged to the landlord in all situations. Again this charge could be applied to the property tax bill.

While the FSC has been a very modest charge for most households depending on the meter size, the 2012 Water Budget increased the FSC by the generic 3.9%. That Budget indicated that there was a "surplus" of about \$340,000 in the FSC account so it was unclear why this increase was required that year. The 2013 and 2014 Budgets propose to simply apply the same generic 7% increase to the FSC in both of the next two years without a discussion of the rationale.

A caution has to be advanced concerning the potential cost of the "paperwork" that might be associated with any transfer of the FSC back to the property tax accounts. Using the \$32 fee charged for the individual service of "transfer to tax" as a proxy for this cost, when multiplied by the number of water consuming units in the City (which now appears to be over 200,000) yields a figure of over \$6 million. This again may suggest that the current water billing system is in need of an overhaul to be made more efficient.

⁵ The total one-time cost of this transfer from the tax bill to bill was alleged by a local newspaper *at that time* to be about \$750,000. This seemed rather high to some people and it may have been due to issues about incompatible billing systems? There is currently a special charge of \$32 to "transfer" water bills to "the corresponding tax account". This may be just to facilitate collection from customers who are in arrears?

There is a reasonable argument that the fire supply charge (FSC) should be allocated based almost solely on the assessed value of the properties being protected and therefore be paid by the property owner rather than the tenant.

The City should consider allocating the cost of any new metering devices should be made proportional to the size of the service rather than being allocated over all consumers.

Municipal Water, Waste Water and Solid Waste Commission

The Council might benefit from additional input on ongoing basis in order to be effective and efficient in the design and management of water rates, waste water treatment and municipal solid waste services. The City has recently created a Transit Commission to improve the process whereby solutions to municipal transit issues can be developed in a more transparent manner. While the transit budget is much larger than the water, waste water and solid waste budget, it is clear that, next to transit route changes, changes to key services such as water and solid waste consistently generate considerable public interest. The policy issues in both areas are similar and the City Staff who deal with them belong within the same functional units.

When concerns were raised during the 2012 Budget by condominium owners at EC about the impact of the bi-weekly pickup of residential waste EC Chair directed staff to set up a special single-issue short term working group to obtain advice. The official title was the Multi-Residential Waste Diversion (MRWD) Stakeholder Group. City staff was responsible for chairing and managing the group and reporting the results to Council. The membership was prescribed to include representatives from different subsectors. It appears that this same approach could work with the approved list of “citizen experts” that was proposed during the governance review of the Advisory Committees.

If a “citizen experts” list is created perhaps the newly created Environmental Stewardship Committee (ESAC) use these citizens to review of some of the recommendations in this submission? The mandate of both EC and ESAC are appended for information purposes in Annex 2.

Council should consider the benefits and costs of creating a new permanent Municipal Water and Waste Commission. The Commission would have a similar governance characteristic as the new Transit Commission.

The Commission would include up to 6 Councillors and 3 Community/Business representatives. The latter group would be selected in an open competition based on appropriate professional and work experience. Like the Transit Commission it would report directly to Council.

If the Council does not wish to consider establishing a new Municipal Water and Waste Commission until after the 2014 election, then an interim alternative would be to develop an informal panel of expert advisors in the area of water, waste water and solid waste. The panel would be of short term duration only and follow the governance model created for the MRWD Stakeholder Group (i.e. prescribe specific professional and other requirements for all members and the group would be chaired by City Staff).

Conclusions on Managing Public Input on Budgets

Everybody talks about the weather and until climate change became noticed nobody seemed to have any suggestions on how to do anything about it. It seems that more recently almost everybody in Ottawa has been talking about how municipal water and waste policies and practices affect their daily lives through their use of green bins, black boxes or blue boxes. In the area of water and waste water there was a substantial wake-up call delivered to everyone with the unpleasant CSO discharges into the Ottawa River and the summer-long drinking water service disruption in Barrhaven.

It is always a challenge to manage this type of public input in an efficient manner. While using a Standing Committee of Council can sometimes be useful it is not always the most efficient use of time. Smaller, less formal meetings could be more effective, especially if they are held earlier in the process of Budget preparation. It is very important that advice from advisory committee volunteers, citizen experts and others should be solicited early and then acknowledged in a constructive manner. There are substantial benefits from receiving practical input from a properly engaged public before decisions become entrenched in a bureaucratic process.

Getting citizens' input into the decisions on water and waste water policy options should be made easier for staff, Councillors and citizens. New options should at least be explored to better use the substantial human capital resource that exists in this City.

List of Annexes

ANNEX 1 Technical Memoranda: Rate Setting

ANNEX 2 Environment Committee and Environmental Stewardship Advisory Committee

