

<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON APRIL 8, 2015</b>
<b>FROM:</b>	<b>JOHN M. BRAAM MANAGING DIRECTOR, ENVIRONMENTAL &amp; ENGINEERING SERVICES AND CITY ENGINEER</b>
<b>SUBJECT:</b>	<b>WATER EFFICIENCY PROGRAM UPDATE - PROPOSED WATER BY-LAW REVISIONS</b>

<b>RECOMMENDATION</b>
-----------------------

That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following actions be taken with respect to the Water Efficiency Program Update and outdoor watering restrictions in By-Law W-8 being "A by-law to provide for the Regulation of Water Supply in the City of London":

- a) the staff report dated April 8, 2015, providing an update on the Water Efficiency Program, **BE RECEIVED** for information; and
- b) the Civic Administration **BE DIRECTED** to take the following actions with respect to By-Law No. W-8:
  - i. prepare a draft proposed by-law to amend By-Law No. W-8 to exclude weekends and statutory holidays from section 9.0 which details outdoor water use restrictions and bring that draft proposed by-law forward at a future meeting of the Civic Works Committee, as a public participation item, in order to receive public comment on the proposed by-law; and
  - ii. undertake a public consultation program to examine further options for watering restrictions for possible implementation at a future date.

<b>PREVIOUS REPORTS PERTINENT TO THIS MATTER</b>
--

- [Water Efficiency Program: Leak Detection Through District Meter Areas EW3772-13, September 23, 2013, Civic Works Committee, Agenda Item #2](#)
- [Update on New Funding Model and By-law For Water, Wastewater and Stormwater Services, April 8, 2013, Civic Works Committee, Agenda Item #12.](#)
- [New "Value Based" Funding Model for Water and Wastewater Services, October 22, 2012, Civic Works Committee, Agenda Item #7](#)
- [Update to Water Efficiency Program, July 19, 2010, Environment and Transportation Committee, Agenda Item #14](#)

<b>BACKGROUND</b>
-------------------

**Purpose**

As legislated under the Water Opportunities (and Conservation) Act, the City is required to implement and maintain a water conservation plan. This report provides Civic Works

Agenda Item #	Page #

Committee and Council with an update of the activities since 2010 and overview of the Water Efficiency Program which meets the legislated requirement for a water conservation plan.

This report also provides a strategy to recognize the conservation efforts of Londoners and makes recommendations for changes to the Water Bylaw W-8 under the section pertaining to outdoor watering restrictions to provide more clarity. These recommendations respond to a February 9 Municipal Council resolution:

*That the Civic Administration BE REQUESTED to review and report back in the Spring of 2015 Bylaw W-8, Regulation of Water Supply, to provide for flexibility in the current watering restrictions during the months of June, July and August, in order to permit the public to respond to drought periods and other individual circumstances where outside watering may be required. (2015 - E13/C01)*

### **Cause for Celebration**

Since 2010, the previous update to the Water Efficiency Program, the City's Water Services area has made a significant change to the water and sewer rate structure, brought in a city-wide leak detection program, partnered with the Thames Valley District Schoolboard to teach local environmental and engineering topics in the classroom, and continued to promote conservation and awareness "out and about" in the community. The Province has also continued to support conservation initiatives through frequent reviews and changes to the Ontario Building Code and the passing of the Water Opportunities and Conservation Act.

In that time, the average household has reduced water use by 14-percent or approximately 30 cubic metres per year. As baby boomers move out of their homes and younger individuals move into these older homes and renovate, water use will continue to decline. In addition to the legislated requirements and the stewardship components, there are real tangible benefits to water conservation that should be celebrated here in London:

1. The City's Water and Wastewater Service areas have incorporated the benefit of conservation directly into the capital budgets through the deferral of major construction projects. With the current consumption trend showing a further decline in the upcoming years, it may be possible to accommodate additional growth with the current water supply and sanitary treatment capacity. While the loss of major water using customers may be felt in the short term on the revenue side of the equation, it does open up capacity for infill and intensification in other parts of the City for smart development which can enhance a struggling neighborhood and help meet the overarching goals of the London Plan.
2. An opportunity to reduce the restrictions on outdoor water use during the summer.
3. Assuming three people per household, the average single family residential household in London consumes 14 cubic metres of water per month which is less than 160 litres per person per day. Volumes of use in this range meet or exceed other water conservation targets around the province, and North America.

### **Well Positioned**

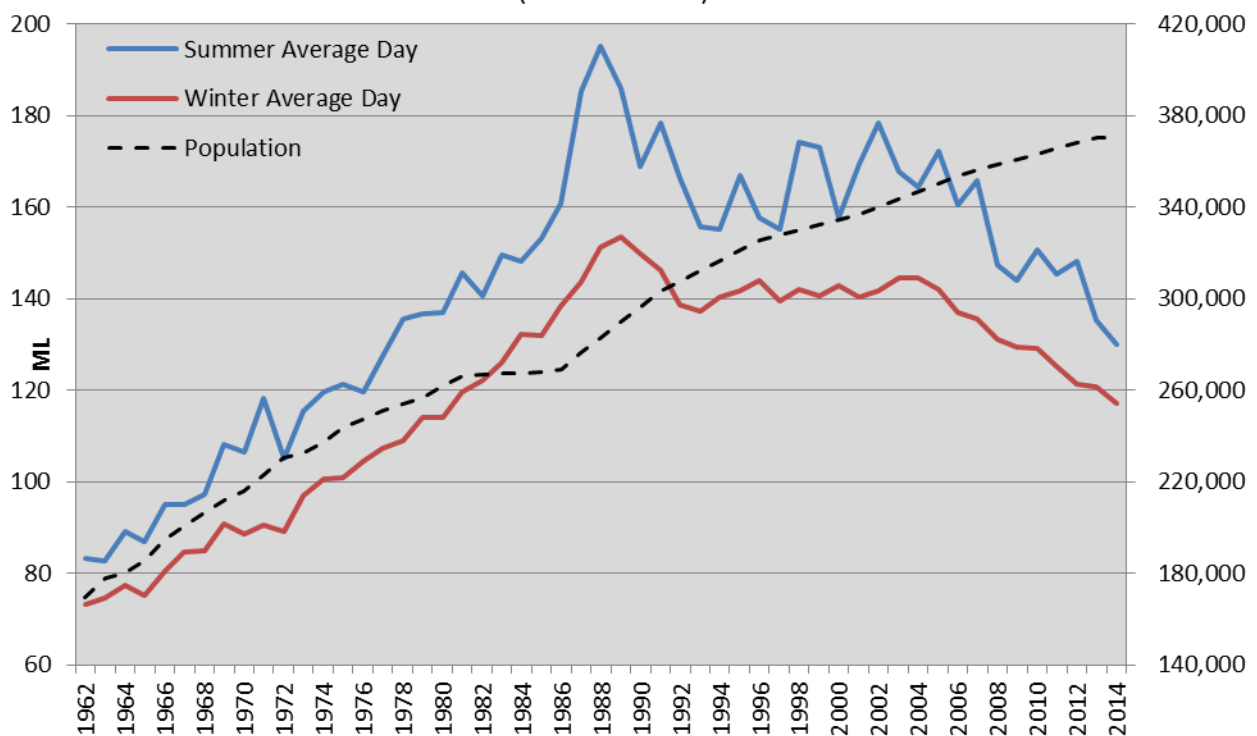
Development activity can vary significantly depending on many different factors including the availability of capacity in the treatment plants and reservoirs. These below noted deferrals allow London to grow with the current asset base and without any new and expensive capacity building projects. Using water conservation as a way to build capacity can help the water utilities plan more effectively for future growth while maintaining existing funding requirements. Considering the lumpy nature of development, conservation can help to smooth the planning process and help systematically plan growth.

Project	Timeframe	Estimated Cost
Elgin Area Water Treatment Plant Expansion	Deferred from 2013 to at least 2023 based on current volume forecasts	\$60 Million
Southside Wastewater Treatment Plant	Deferred more than 20 years	\$95 Million

In terms of development and growth, the graph below depicts the history of pumped water use and the relationship to population in London since 1962. The population of London has been overlaid to show that although the potential demand for water has increased, the actual use has stabilized in the 1990's and declined significantly over the past ten-years. The graph shows winter average day which describes the base demand that the City would need to provide year round. This usage includes water using activities associated with manufacturing and production, day to day business operations, and typical household consumption. The summer average day includes all the activities noted in the winter, but adds outdoor water use activities like irrigation and pool filling. What is apparent is the decline of summer usage to pre-1978 volumes despite an increase in population of over 100,000 people.

Staff believe that this decline in usage is directly attributable to three main elements: a societal shift in behaviour, legislative tools, and local financial instruments (water rate structure). The various water efficiency outreach programs help citizens understand the value of the water and the benefit they receive from its service. The second major change involves the Ontario Building Code which has mandated low flow fixtures following consultation with Water Efficiency experts in Canada and the United States. The third reason relates back to the way that water is billed to customers in London, which rewards low consumption and penalizes high usage.

**Average Daily Trends**  
(1962 to 2013)



**Leak Detection and Non-Revenue Water**

Non-revenue water (NRW) is the difference between water pumped into the City and what is sold to our customers. NRW is tracked by municipalities all over the world as a key

performance indicator measuring the efficiency of the system. The City's NRW fluctuates from year to year based on various external and internal factors. Cold weather can have a significant impact as the frost penetrates below the surface of the ground and can freeze around watermains and water services which can create movement of pipes as the water in the soil expands and contracts through the freeze-thaw cycle. This movement can cause the pipes to leak and over time can result in rupture. Other elements in addition to watermain breaks such as firefighting, theft of water, water used for construction, meter inaccuracies, and water quality maintenance activities can add to the overall NRW values. Based on a 2011 study conducted by the AWWA, the average in NRW North America is 21.4% for systems servicing more than 50,000 customers noting that the State of California recommends 10% as a target level.

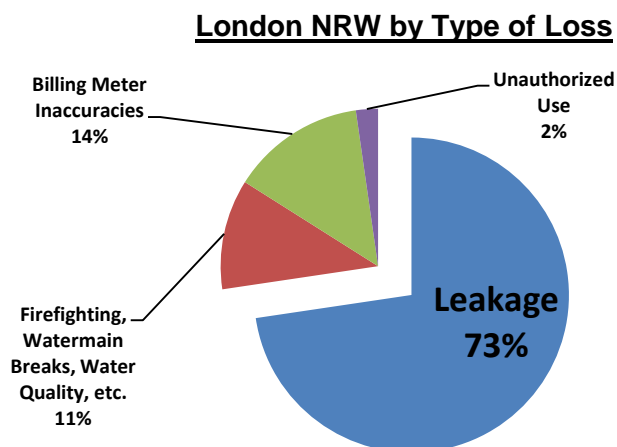
**London NRW Performance**

Year	2007	2008	2009	2010	2011	2012	2013	2014
Million m <sup>3</sup>	4.178	3.726	4.442	5.167	5.248	5.411	4.110	3.788
Percent	7.7%	7.4%	9.0%	10.2%	10.8%	11.2%	8.9%	8.5%
Cost of NRW (\$millions)	\$1.25	\$1.20	\$1.52	\$1.87	\$2.02	\$2.20	\$1.77	\$1.74

The table above shows the amount of water loss in London and the variation from year to year. Although the recent volume of loss is relatively low, the cost to purchase water from the Elgin and Lake Huron Primary Supply Systems continues to increase which raises the significance of NRW in the annual operating budget. Through NRW reduction, there is an opportunity to reduce the annual expenditures of the water system. These activities will also “build” more capacity in the water system to accommodate growth without needing to construct new pipes or facilities. It is important to point out that it is not financially viable or practical to attempt to reduce NRW to zero. Activities like theft of water that contribute to NRW are difficult to find and even more difficult to prove.

Watermain breaks, billing meter inaccuracies, and water quality maintenance can be reduced with enhanced capital replacement and rehabilitation programs. Other activities like firefighting and construction water use will always be part of the day to day operation of the system.

In many municipalities, leakage makes up the largest portion of NRW and most are higher than London’s at around 90-percent. Through leakage reduction, London can also reduce the volume associated with watermain breaks and catch leaks before they proliferate and cause the pipe to rupture. As shown by the chart below, active leak detection activities have the potential to reduce the most significant portion of non-revenue water which will lead to lower annual purchase of water costs. Water loss experts give a range of 25-percent to 40-percent as good targets for the prevention of leakage in the initial stages of an overall reduction plan. These estimates would bring London near the pre-2009 NRW volumes with the additional benefit of finding and preventing future leakage from occurring as watermains continue to age.



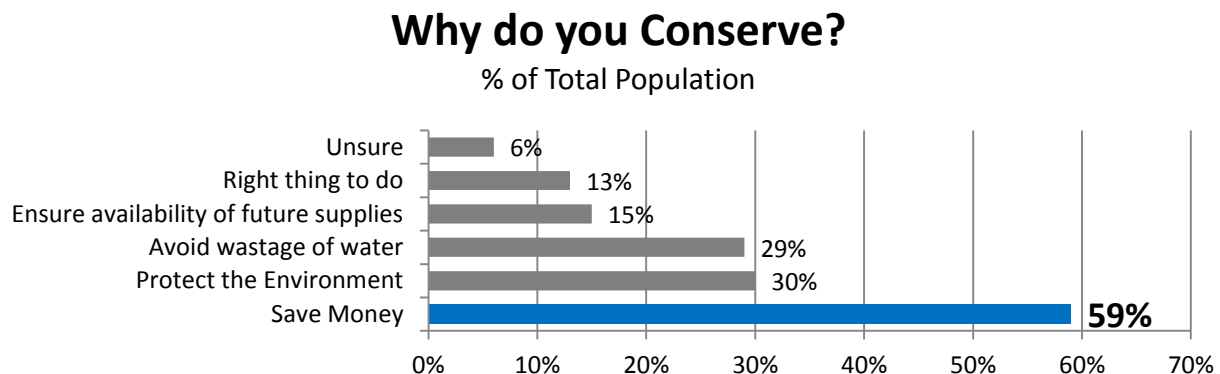
### City-wide District Meter Areas

Through the implementation of a City-wide district meter area program over the past two years, London is taking advantage of existing staff and technology investments to reduce the volume of water purchased. In 2014, seven DMA's were installed and operated resulting in the measurement, detection and repair of leakage in the range of 90 litres/minute/DMA. Assuming that the leaks were running for a full year, this rate of leakage would equate to 330,000 cubic meters or approximately \$140,000 in avoided purchase of water cost and would reduce non-revenue water by 0.8 percent. In terms of future management, Water Services staff now have a baseline water use for the seven 2014 DMAs and can measure an increase from a baseline position to better understand when to deploy Operational staff to pinpoint the leaks. For 2015, the second full year of implementation, the DMA program has released a tender to install 19 water meters in the distribution system to facilitate the operation and installation of 11 new district meter areas.

For additional details, a companion report has been prepared to award the *DMA Meter Chamber Installation* contract.

### **Relationship between Conservation and Billing**

In alignment with water industry best practices and the provincial mandates to develop and operate a water conservation plan, during the public consultation on the rate structure, citizens identified a strong desire to receive a financial benefit for undertaking conservation activities in the home. These desires have been studied further through customer surveys since the rate change in 2012 and the desire to save money still resonates with Londoners which is shown below (2014 Water and Wastewater Customer Survey):

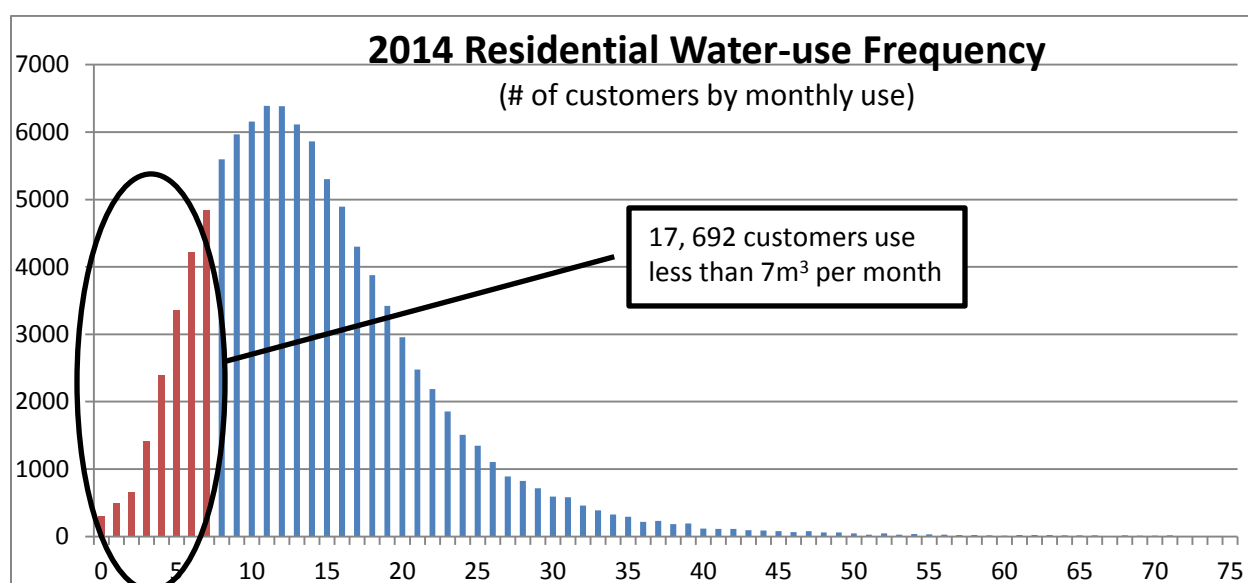


With this direct financial benefit in mind, the usage rates for both water and wastewater were designed to increase significantly in the first three blocks of use which helps cover a significant portion of the basic costs for the pipes and reservoirs. The average residential user consumed 14 cubic metres in 2014 and any customer who use between 8 and 35 cubic meters per month can have direct control over the cost of their bills by conserving. However, with the addition of the fixed-monthly *Infrastructure Connection Charges* which includes the first 7 cubic metres of use, the low-volume customer has lost the financial incentive to conserve further. These customers average use could be less than 7 cubic meters per month, for which they would pay the same amount and not receive a direct benefit on their bill. The fixed connection charges have been designed to support the renewal of the infrastructure that provides these services.

Recent water customer survey data (pie chart above) reinforces the fact that customers are looking for a payback for their conservation efforts. About 59% of Londoners have identified saving money as a key driver for their conservation activities. What the pie-chart does not show is the split between low-volume users and the rest of the residential population. In 2012, the

customers to the left of the graph who averaged less than 7 cubic meters per month (circled with red bars) made up approximately 13,000 customers. Since March of 2013, this group has increased to represent more than 17,000 customers or just fewer than 18% of our total single family residential customer base. In terms of our customer survey, we can assume that there would still be a majority of the high consuming customers who identify with the need to save money and will still receive a direct financial benefit by conserving. This will continue to drive conservation into the future.

Further discussion on a strategy to reward low-volume users can be found in the companion Civic Works Committee report *Water and Wastewater Customer Service Review – Customer Reward Program*.



A copy of the City’s water and wastewater rate card can be found in Appendix ‘A’. The card outlines all of the rates and charges found on the monthly water and wastewater bill.

### Water Use Behavior and Outreach Programs

The main goal of London’s Water Efficiency program is to promote the wise use of water which is directly linked to the value that clean water provides a city. To reinforce the value, City staff has developed a series of marketing tools, campaigns, and programs to help reinforce the message that these systems are constructed for the public good and that their maintenance and operations meet or exceed desired levels of service. The program delivery model has focused on partnerships with many different departments within the City as well as external groups with similar conservation minded interests.

The *Residential Water-use Frequency* graph has identified a change in behaviour by our customers between 2012 and 2014. To better understand this change and to determine how and where we spend capital funds on promotional campaigns, an analysis of the water users and the behavioral patterns they exhibit is used. In 2011, City staff undertook a multi-municipal project with Guelph, Barrie, Hamilton, and Toronto where the Canadian Urban Institute and Environics were hired to undertake a review of the water using behaviour of all our single-family residential (SFR) customers in the city. Environics was able to use their 66 population segments to further narrow down water use behaviour to eight water using types. These segments give City staff the ability to focus campaigns and pick out certain behaviours that are common so that communication dollar effectiveness can be maximized.

In 2013, following the delivery of the reports to all five municipalities, a deeper analysis was undertaken to see if there were any common behaviors exhibited by all eight clusters. The eight groups were refined into three London specific groups (Sensible Families, Water Abusers, and Sipping Urban Singles & Couples). For all three groups the need to connect to a Canadian



Agenda Item #	Page #

Identity was rated as a high priority among other social values like Ecological Lifestyles, Faith in Science, or the Importance of Price. This was a key component of developing the *Check Your Toilet* campaign which links one of Canada’s national obsessions (hockey) to water use.

### Check Your Toilet

Building on the success of the Value of Water campaign that was a key component of the recent rate structure change, City staff has developed a campaign to help educate water customers about the biggest water waster in their home: the toilet. This two year campaign includes a 15 second commercial on Rogers TV, advertisements on rink boards around the city’s arenas, 4 Zamboni wraps, and a “Power Ring” animation during London Knights home games. As part of the campaign, toilet leak tests are distributed to all the arenas where the ads are posted so that anyone can go and check their own toilet for leaks.



Discussion of other water conservation outreach programs can be found in Appendix ‘B’.

### **Outdoor Water Use**

In response to a Lake Huron pipeline break in 1988 when summer average water use peaked to an all-time high, even-odd day outdoor watering restrictions were incorporated into the Water bylaw. This change in policy helped spread the water use out more evenly from day to day and reduced the strain on the treatment plants, pump stations, and reservoirs. In the following 27 years, water use and its associated behaviours have changed significantly. In the mid-80s, home construction generally did not utilize water efficient fixtures. Since then the Ontario Building Code has mandated low-flow for all typical household fixtures. The resulting water use decline has been apparent and simple toilet changes, to lower flow versions, can account for a 40-percent reduction of household water use.

Recognizing that under normal operating conditions the water supply system in London is capable of meeting the daily water use demands of residents and businesses, staff are proposing an initial relaxation of the even-odd restrictions on weekends and holidays. Further engagement with the public on the outdoor watering restrictions currently outlined in section 9.0 of the Water Bylaw (W-8) is recommended in order to bring together the issues of conservation and outdoor water use.

Some municipalities have tiered systems that would act similarly to the Upper Thames Region Conservation Authority (UTRCA) drought restrictions which could be one option which would require a detailed communication plan to ensure that the public is aware of what the current restriction levels are. Ultimately, there needs to be flexibility for the City to ensure that mandatory conservation can be imposed in the event of a catastrophic break on a major supply pipeline, repairs to a reservoir, or some other event that would restrict the availability of supply for fire protection or water for major health care facilities. The following objectives could be considered when developing the public input program:

1. Ability to supply water for fire protection and health care;
2. Legislative requirements;
3. Consistency with other local watering restrictions where applicable;
4. Easy to understand and administer;
5. Promotion of water conservation;
6. Flexibility for the citizens of London to use water at their discretion.

Agenda Item #	Page #

Staff are proposing the following steps in order to consider changes to the watering restriction portion of the existing bylaw beyond that proposed as an initial change:

- Consult with the public;
- Consult with the Upper Thames Conservation Authority, the City’s Urban Watershed Manager, and the City’s Urban Forester to see if there are opportunities for consistency between the policies to reduce confusion in the public;
- Develop draft by-law amendments;
- Confirm notification requirements with Legal Department to implement fines for Level 3 violators;
- Recommend changes to the by-law to the Municipal Council
- Hold a public meeting;
- Finalize by-law amendments based on feedback from public;
- Enact bylaw;

Meanwhile, until the full extent of the public consultation can be completed, the current even-odd day restrictions would be relaxed. The bylaw would change to exclude weekends and statutory holidays during the watering restriction months of June, July, and August. Residents and businesses would be able to use outdoor water on weekends and long-weekends but would continue to have even-odd day restrictions during the week. This is a simple measure to implement and understand.

### **Future Programs**

The promotion of the value that a public water system provides the City of London should continue with more innovative and responsive programs that assist our citizens learn and understand the benefits of conservation. Some suggested opportunities exist in the future to further the education and promotion of water use and overall reduction:

- Irrigation education programs to reduce the loss of water through inefficient irrigation systems;
- Industrial, Commercial, Institutional conservation programs – such as water efficiency audits;
- Expansion of the targeted outreach to look at specific customers in more detail and drive the conservation message. Could be expanded use of social media or other innovative marketing techniques;
- Expand the breadth of the Growing Naturally program to operate year round and provide opportunities for individual customers to register for leak check, or water efficiency “in-home” audits;
- Continue to grow the Teaching Toolkit to include more than just the Thames Valley District School Board Teaching Toolkit and develop curriculum links in the Catholic Board, private schools, and potentially special interest groups (Scouts Canada);
- Look at the recovery of water efficiency funds from Development Charge revenue – some Ontario municipalities already doing this (Guelph);
- Provide shared funding for the program from both the Water and Wastewater Service areas;
- Build a reward system for stable water conservers – e.g. Aeroplan;
- Further automation of DMA through wireless connections to DMA meters, reporting tools in the office set to notify when leakage exceeds certain level;
- Sustainable renovation grants or local improvements to assist homeowners with the installation and retro-fitting of environmentally conscious structures, appliances and fixtures.

These programs will be considered further in upcoming Business Plans.



Agenda Item #	Page #

**Conclusion**

The City of London’s water efficiency program has helped reduce water consumption by 14-percent in the past five years which is below pre-1978 levels notwithstanding the addition of 100,000 residents. The program, managed in the Water Services Area, includes education as a major component, and significant leak detection activities to reduce the operational impact of leakage on the purchase of water. Through the development of inter-municipal and inter-departmental partnerships, the Water Efficiency Program has been able to maximize the dollars spent and position London’s Water supply system well enough to accommodate future growth without significant future capital expenditures.

**Acknowledgements**

This report was prepared by Matt Feldberg, Water Demand Manager, with assistance from Paula Bustard Water Demand Technologist, and Megan Wibberley Water Demand Technologist, Pat Donnelly, Urban Watershed Manager, Heather Chapman Manager, Municipal Law Enforcement Services, and Orest Katolyk, Manager Licensing and Municipal Law Enforcement.

<b>SUBMITTED BY:</b>	<b>SUBMITTED BY:</b>
<b>ROLAND WELKER, P.ENG. DIVISION MANAGER, WATER ENGINEERING</b>	<b>JOHN LUCAS, P.ENG. DIRECTOR, WATER AND WASTEWATER</b>
<b>RECOMMENDED BY:</b>	
<b>JOHN BRAAM, P.ENG. MANAGING DIRECTOR, ENVIRONMENTAL &amp; ENGINEERING SERVICES &amp; CITY ENGINEER</b>	

March 20, 2015

Attachments: Appendix ‘A’ – [Water Utility Rates for the City of London](#)

Appendix ‘B’ – Water focused community outreach, projects, programs, and partnerships

- Cc: John Simon  
Jay Stanford  
Pat Donnelly  
Andrew Henry  
Tom Copeland  
Geordie Gauld  
Ivan Lister  
Dave Mounteer



**Water Utilities Rates for the City of London**  
*Effective January 1, 2015*

# 2015 Monthly Charges



## Charges Based on Monthly Consumption (m<sup>3</sup>)

Cubic Metres (m <sup>3</sup> )	Cubic Metres In Tier	Water Rate (\$/m <sup>3</sup> )	Wastewater Rate (\$/m <sup>3</sup> )
0 - 7	7	\$ 0.00	\$ 0.00
8 - 15	8	\$ 1,999.96	\$ 1,777.2
16 - 25	10	\$ 2,571.0	\$ 2,285.0
26 - 35	10	\$ 2,856.7	\$ 2,538.9
36 - 250	215	\$ 1,085.6	\$ 0.9647
251 - 7,000	6,750	\$ 1,028.4	\$ 0.9140
7001 - 50,000	43,000	\$ 0.9371	\$ 0.8328
over 50,000	all above 50,000	\$ 0.8343	\$ 0.7414

Average monthly water use for residential customers is about **14m<sup>3</sup>**

## Adjusted Water and Wastewater Rate Tiers for Multi-unit LDM Customers

Cubic Metres (m <sup>3</sup> )	2	3	Number of Units	4	5	6
0 - 7	7	7	7	7	7	7
8 - 15	16	24	32	40	48	48
16 - 25	20	30	40	50	60	60
26 - 35	20	30	40	50	60	60
36 - 250	430	645	860	1,075	1,290	1,290
251 - 7,000	13,500	20,250	27,000	33,750	40,500	40,500
7001 - 50,000	86,000	129,000	172,000	215,000	258,000	258,000
over 50,000	over 100,000	over 150,000	over 200,000	over 250,000	over 300,000	over 300,000

# 2015 Monthly Charges

## Connection Charges Based on Meter Size

Millimetres (mm)	Water Connection Charge (\$/month)	Wastewater Connection Charge (\$/month)
16	\$ 14.04	\$ 11.89
19	\$ 21.06	\$ 17.83
25	\$ 35.10	\$ 29.70
40	\$ 70.20	\$ 59.40
50	\$ 112.33	\$ 95.04
76	\$ 245.69	\$ 207.89
100	\$ 421.19	\$ 356.38
150	\$ 982.80	\$ 831.57
200	\$ 1,684.77	\$ 1,425.55
250	\$ 2,106.08	\$ 1,782.44

A typical residential customer has monthly connection charges of:

Water Connection Charge	\$ 14.04
Wastewater Connection Charge	\$ 11.89
Stormwater Charge	\$ 14.49
Fire Protection	\$ 1.44
Customer Assistance	\$ 0.25
<b>Total</b>	<b>\$ 42.11</b>

## Connection Charges

Low-density Residential	Fire Protection Charge (\$/month)	Customer Assistance Fund (\$/month)
Commercial, Industrial, Institutional, Medium & High-density Residential		
5.0 hectares or less	\$ 1.44	\$ 0.25
Over 5.0 hectares	\$ 9.63	--
	\$ 48.15	--

## Stormwater Charges

Land area equal to or less than 0.4 hectares	Stormwater Charge (\$/month)	Stormwater Charge (\$/hectare/month)
Residential, land area equal to or less than 0.4 hectares without a storm sewer within 90m	\$ 14.49	--
All lands greater than 0.4 hectares	\$ 10.87	\$ 120.57

Agenda Item #

Page #



Agenda Item #	Page #

## Appendix 'B'

### Water focused community outreach, projects, programs, and partnerships

#### Teaching Toolkit

Through a partnership with the Thames Valley District School Board (TVDSB), the City of London is working with teachers to offer local information, data, maps and resources to develop customizable curriculum related lessons and activities. These lessons are designed to be inquiry-based, action oriented, cross-curricular, and locally-focused. They incorporate and use authentic London examples to increase learning and encourage students to be engaged in their community. To date, we have developed multiple secondary school level lessons that are available on our website ([www.london.ca/teacher](http://www.london.ca/teacher)). We are currently working with teachers at both the secondary and elementary level to continue development.

#### Home Shows and other events

In partnership with the Environmental Programs and Solid Waste groups, the Water and Wastewater Service Areas have been increasingly visible at various major events throughout the city. The Home Show provides the most space and has been the greatest success giving



the City an opportunity to showcase the many different programs focused on sustainable infrastructure – not just water and wastewater. The City's 2015 Home Show space won an award for the Best Feature Display included Environmental Programs, Solid Waste, Transportation (SHIFT), as well as the Water and Wastewater groups. The various displays encompassed many community initiatives and programs focused not just on

the conservation message. The entire display was themed “average use” and for the Water and Wastewater groups, included: two interactive booths that gave event-goers an opportunity to participate in a taste test to guess which water is from Lake Erie or Lake Huron as well as an actual flushing toilet display to teach about fats, oils, and grease (FOGs). Some of the more static water focused displays included a life-sized model of the average user's water use (14 m<sup>3</sup>) and a display dedicated to basement flooding – new to the Home Show display in 2015.

#### Water Conservation Videos



A partnership with six other Ontario municipalities (City of Toronto, Region of Waterloo, Halton Region, York Region, City of Guelph, and Region of Peel) was formed to create 11 water conservation videos for both indoor and outdoor use. City of London staff led the project and handled procurement, content, and the coordination between the 7 partners. They are housed on the City's YouTube page under “**Be Water Smart!**”

#### Growing Naturally

The Growing Naturally Home Visit Program is intended to provide suggestions to help residents reduce the environmental impact of their home's outdoor space. The Home Visit focuses on six main categories: water conservation, garden care, natural lawn care, energy conservation, waste diversion and pollution prevention. The on-site visit allows City staff to make suggestions catered to each property, and allows residents to ask specific questions regarding their home. After the visit, a custom report is provided with fact sheets to help residents get implement



Agenda Item #	Page #

suggestions. The recommendations help to save water and energy by using greener more natural methods to have a beautiful yard. The results are healthier for the environment, for our neighbourhood and our City. The program has grown substantially since 2012, with 60 visits in 2013, and 189 visits in 2014. The program was the focus of a *London Free Press* article in July 2013 which helped drive the interest.

Residents who participate in the program can elect to receive a graph of their water data, which helps focus a discussion on personal water consumption and why most residents have a higher consumption patten in the summer months. Rain gauges are also provided which helps residents to increase their watering efficiency, and discuss how to properly establish and hydrate plants. For 2015, a new automated report program is being developed as is the implementation of an online booking system with more appointment times available to try and meet the increased demand. There are currently 70 residents on the waiting list for 2015 appointments, which will start booking in April.

### Thirstmobile

In the 2015 business plans that accompany the 2015 Budget, the Special Events group from Neighborhood and Recreation Services has outlined their intent to continue to grow festivals around the city in balance with the passive non programmed use of the city parks system. In conjunction with these goals and the anticipation of increased requests for City water, a portable water dispensing station was purchased in 2014 to provide safe and clean city water for the various events. This unit, called the Thirstmobile, includes a series of solar panels to run dispensing pumps and chillers, 8 bottle fillers, as well as 8 regular and 2 accessible drinking fountains. The Thirstmobile's inaugural event was over the June 13th, 2014 weekend at the Children's Festival in Victoria Park. Since then, the festival going community used about 8 cubic metres of water at its first event, which works out to 4,000 plastic bottles saved. In 2015, the Thirstmobile will continue to prioritize downtown festivals and events held at Victoria Park, but could be available for other locations with an appropriate water connection and with advanced booking through Parks and Recreation Services.



### Websites, publications, handouts, and social media

In order to connect with the various customer types across the city, city staff have created and developed many different tip handouts, staff are actively engaging in social media use (about 1 water focused tweet/post per week since January 2015), and a revamp of the website a few years ago to ensure that the information could be easily accessed – this includes the development of an interactive Water Conservation House that lets website visitors hover over the various water using fixtures in their home to gain tips on reducing use (<http://www.london.ca/residents/Water/Water-Conservation/Pages/Water-Conservation-House.aspx>).