

Appendix A - North American Municipal Water Efficiency Programs

Municipality	ULF Toilets	ICI & Multi-Unit ULF Toilets	Dual Flush Toilets	Toilet Flappers Replacement	Showerheads and Aerators	Water Efficient Dishwasher	Water Efficient Clothes washer	Multi Unit Water Efficient Clothes washer	Water Softeners	Water Efficient Humidifiers	Rain Barrels	Residential Indoor Audits	Residential Outdoor Audits	Naturescaping	ICI Audits	ICI Capacity Buyback	Pre-rinse Spray Valve	Children's Water Festival	Outdoor Water Use Bylaw	Legend
York Region	\$60R	Ed	\$75R	Free	Free	Ed	Ed		Ed	Ed	\$30DS		Free	25% discount coupon	Free	Pending		Yes	Yes	Ed – denotes a municipality which promotes a measure through education but does not provide product or rebates. R – denotes a municipality which provides a rebate to a customer that purchases and installs a water saving product. Amount of rebate is indicated in dollars per product installed.
Peel Region	\$60R	\$60-\$100R	\$100R	\$5DS	\$5DS	Ed	Ed				\$50DS		Free	\$15DS	Free	\$.25/L	Free	Yes	No	
Durham Region	Ed	Ed	Ed	Ed	Ed	Ed	Ed		Ed	Ed	Ed			Ed				Yes	Yes	
Toronto	\$60R	\$60-\$150R	\$75R		\$10DS		\$60R	\$125R			\$70DS		Free	Ed	Free	End 1/1/09	Free	No	No	
Niagara													Pilot	Ed				Yes	No	
Waterloo	\$40R	\$40-\$60R	\$60R		Ed	Ed	Ed		Ed		\$30DS			Ed	Free		Free	Yes	Yes	
Halton	\$60R		\$75R	Ed	Ed	Ed	Ed		Ed		Ed		Free	Ed				Yes	Yes	
Guelph	\$40R	\$60R	\$60R		Ed	Ed	\$100		Ed			Ed	Free	Ed	Free	\$.30/L			Yes	
Ottawa	\$60R		\$75R		Ed	Ed	Ed				Ed			Ed	Free			Yes	No	
Peterborough	Ed		Ed		Ed	Ed	Ed		Ed		\$72DS			Ed				Yes	Yes	
London																			Yes	
Welland	\$60R		Ed			Ed	\$100R				Unlisted	\$250DS	Pilot	Ed			Free		No	DS – denotes a municipality which purchases a supply of a water efficiency product and sells it to their customers at a discounted price.
Hamilton	\$50R		\$60R		Ed	Ed	Ed				\$40-\$113DS			Ed					Yes	
Barrie	\$70R				Ed	Ed	Ed		Ed		Ed			Ed					Yes	
Kingston	Pend.	Pend	Pend		Ed	Ed	Ed				\$32			Ed					Yes	
Brantford	Ed				Free	Ed	Ed				\$35			Ed				Yes	Yes	
Denver	\$25R	\$25-\$125R	\$125R	Ed	Ed	Ed	\$150R	\$150R			Ed	Ed	Ed	\$150R	Free	Yes	Free		Yes	
San Francisco		\$125-\$200R	\$125-\$300R	Free	Free	Ed	\$125-200R	\$200R	Ed		Ed	Free	Free	Ed	Free	Yes	Free		No	Free – denotes a municipality that offers a free service to its customers.
Austin, TX	Free-\$200R	Free-\$200R	\$50-200R	Free	Free	Ed	\$150R	\$250R			\$60DS	Free	Free	\$150R	Free	Yes	Free		Yes	
Southern Nevada				Ed	Free	Ed	Ed					Free	Free	Ed	Free		Free	No	Yes	
Calgary	\$50R	\$50R			\$15	Ed	Ed				\$60DS			Ed	Free				Yes	

Water Conservation Initiatives by Municipality

ONTARIO MUNICIPALITIES

City of Barrie

Indoor Water Efficiency

From 1995 through 1999 the City of Barrie offered a fixture replacement program for toilet flappers, showerheads and faucet aerators for residents. From 1998 through 2002 the City provided rebates for front loading washing machines. Presently, Barrie offers a \$70.00 rebate for residents who purchase ultra-low flow toilets (6L/ or less).

Outdoor Water Efficiency

In 2005, the City of Barrie created a community water efficient demonstration garden. The City has coined the term "Muskoka Gardens" to describe low maintenance, water efficient gardens that utilize native plants. The City also provides residents with a free water efficiency handbook that provides information for residents to reduce water both indoors and outdoors.

By Laws

The City of Barrie has outdoor watering restrictions for residents. Created in 1994, the bylaw restricts outdoor watering to odd numbered houses on odd number calendar days and even numbered houses on even number calendar days. Watering times are also restricted to between 6pm and 8am. Exceptions are made for watering new sod, hand watering, and watering from rain barrels or private wells.

Increasing Water Rate Block Structure

Another measure used for controlling summer peak demand is a water rate structure that increases the cost of water as water consumption increases. This encourages residents to conserve water through financial incentives.

2008 Residential Water and Sewer Rates

Usage (m ³ /month)	Water Rate (\$/m ³)
0 - 15m ³	\$0.5515
>15m ³ - 30m ³	\$1.1019
>30m ³ -45m ³	\$1.6534
Over 45m ³	\$2.2038
Monthly Service Charge	\$6.08

Other

The City of Barrie provides residents with online information that outlines the various steps that can be taken to conserve water in the home. The website also provides a self-audit sheet that residents can use to assess their water consumption.

Source: <http://www.barrie.ca/Content.cfm?C=533&SC=1&SCM=0&MI=245&L1M=4>

City of Brantford

Indoor Water Efficiency

The City of Brantford's website provides education resources on indoor water conservation for residents. The various tips are categorized into bathrooms, kitchens and laundry rooms.

The City also provides free indoor water efficiency kits including low-flow showerheads, faucet aerators, toilet tank dams and toilet leak test kits. The kits are available at community events and local retailers during selected periods throughout the summer. They may also be ordered through Brantford City Hall.

Outdoor Water Efficiency

The City's website provides education on reducing outdoor water use. The City also offers a subsidized rain barrel program the last Saturday of May each year. The rain barrels are sold for \$35.

Bylaw

The City of Brantford has a water conservation bylaw for outdoor water use. The bylaw is applicable from June to August and restricts outdoor watering to odd numbered houses on odd number calendar days and even numbered houses on even number calendar days. The watering times are restricted to between 7-9am and 7-9pm. The bylaw also restricts excess watering or pooling on paved surfaces.

The bylaw adds specific prohibitions to irrigation systems including restrictions against use during rainstorms, excess run-off and spraying onto paved surfaces. Residents may apply for a Lawn and Garden Watering – Special Permit application for permission to water outside the times permitted in the bylaw. The bylaw also restricts car washing with a hose that is not equipped with a shut off valve at the end of the hose. Watering bans can be issued at a time when the Grand River Conservation Authority declares a drought based on water levels in the Grand River. This bans all outdoor water use.

Children's Water Festival

The City of Brantford hosts a Children's Water Festival each year. The event is hosted in partnership with the Grand River Conservation Authority. It is a three day festival for grade 4 students and was launched in 2006.

Source:

<http://www.brantford.ca/content/publishing.nsf/Content/Water+Conservation+Program>

Durham Region

Indoor Water Efficiency

Between 1996 and 2004, Durham Region offered residents a series of toilet replacement incentive programs. Residents were offered a low flow toilet (6L), installed, for \$153 between the years of 1996 through 1998. Several additional toilet replacement programs were offered in specific municipalities within Durham. The programs were established to delay expansion of water treatment infrastructure. In 1999, residents of Uxbridge were offered free toilets and charged \$65 per installation. In 2000-2001, residents of Port Perry were offered free 6L toilets with an installation charge of \$67.

The final program was restricted to residents of Cannington, Orono and Sunderland in 2002 and 2003. Three types of water efficient toilets were offered, including a dual –flush toilet, at a subsidized cost of up to \$150. Installation was an additional cost incurred by each resident.

The Region of Durham currently offers a free household guide to water efficiency for all residents. Residents can sign up online for the booklet and have it mailed to them. The website also provides detailed information on purchasing a low flow toilet, including performance ratings, brand names and store locations.

Outdoor Water Efficiency

The Water Efficiency Gardening program in Durham offered free home landscape audits for a two year pilot program in the summers of 1997 and 1998. The home visits were conducted by landscape students. The Region also created a water efficient demonstration garden with interpretive signage at the Regional Headquarters which was removed in 2003 due to the construction of a new headquarters building. The Region continues to hand out rain gauges at various garden centres throughout the Region.

Bylaw

The Region of Durham's bylaw restricts lawn watering in the months of May through September, to odd numbered houses on odd number calendar days and even numbered houses on even number calendar days. The Region also reserves the right to prohibit all outdoor water use as per the discretion of the Commissioner of Works.

Children's Water Festival

The Region of Durham partners with the Central Lake Ontario Conservation Authority to host the Durham Children's Groundwater Festival for one week each September. There is a cost of \$7.50 per student and \$2 per adult supervisor, plus a .50 gas surcharge per person. Grade fours are invited and high school students participate as volunteers.

Other

The Region, in partnership with Tribute Communities and Natural Resources Canada, developed a water and energy efficient demonstration community beginning in 2004. The subdivision has 100 homes that have been fitted with energy saving fixtures and appliances and drought tolerant landscaping.

Source: <http://www.region.durham.on.ca/waterefficiency/>

City of Guelph

Indoor Water Efficiency

Royal Flush Toilet Program

In 2003 the City of Guelph introduced a rebate program for the replacement of 20L and 13L per flush toilets with approved water efficient models of 6L per flush or less. Rebates are \$40 for 6L ultra-low flush (ULF) toilets, and \$60 for high efficiency toilets (HET). Rebates are available for residential, multi-residential and ICI customers and over 5,600 rebates have been issued since 2003.

Smart Wash Clothes Washer Rebate Pilot Program

This pilot program was a partnership between the City of Guelph and Guelph Hydro which offered 500 rebates at \$100 available for front loading energy star rated models. The pilot program was launched on February 1, 2008. By June 25th, 2008 the maximum of 500 rebates was reached and the program was put on hold.

The Guelph website also provides residents will the tools required to conduct their own home water audit and additional information on water conservation in the home.

Outdoor Water Efficiency

Landscape Assessment Pilot Program

The City of Guelph offers residents complimentary home landscape visits to provide technical advice on how to create a water efficient landscape with landscape design, plant selection and proactive best management practices.

City of Guelph Facility Water Efficiency Retrofits

Water efficiency retrofits are offered for washrooms of high volume-of-use public facilities. Installation items include toilet flush valve retrofits, installation of low flow toilets, urinal tank controller installations and the introduction of faucet aerators in washroom and kitchen facilities.

Public Education and Outreach

The City of Guelph promotes water efficiency at numerous festivals, workshops, home shows and other public events. New in 2008, the City recognizes community leaders in water efficiency in three categories: residential, business and community/educational.

Bylaw

The City of Guelph has a coloured system for restricting outdoor water use. The following outlines the detail of the restrictions for each level.

Level 0- Blue – Careful use

Lawn watering restricted to odd numbered houses on odd number calendar days and even numbered houses on even number calendar days. Exceptions are made to lawn that have been treated with chemicals (watered within 48 hours of application) and require watering. Residential vehicle washing is prohibited unless the hose has a shut-off nozzle.

Level 1 – Yellow- Reduce outside use

The same restrictions as above. New lawns being watered outside of the odd/even day guidelines require a permit.

Level 2 – Red – Reduce and stop nonessential use

Lawn watering is not permitted. Treated lawns can be watered within 48 hours of treatment and new lawns must get a permit. This level restricts watering of trees, shrubs, flowers and gardens to even and odd days between 7-9am and 7-9pm. Residential vehicle watering is restricted to even and odd days, with a shut off valve on the hose.

Source: <http://guelph.ca/living.cfm?subCatID=1207&smocid=1791>

Halton Region

Indoor Water Efficiency

Halton Region's website provides educational resources on indoor water conservation for residents. The various tips are categorized into toilets, laundry, faucets, showers and baths. A resident may obtain a free copy of CMHC's Household Guide to Water Efficiency.

Halton Region offers a toilet rebate of \$60 for ultra-low flush toilets (6L) and \$75 for dual flush and high efficiency toilets approved by the Region. Residents must own or rent a single family home and may apply for one rebate per household.

Outdoor Water Efficiency

The Region's website provides education on reducing outdoor water use. Advice is provided on water efficient gardening, lawn and garden care and rain barrels. Free rain gauges are available through the website.

Landscape Assessment Program

Halton's landscape assessment program provides free information on outdoor water efficiency to Halton residents. Landscape advisors visit homes and offer suggestions and supporting materials regarding landscape design, maintenance, and planting alternatives that promote outdoor water efficiency.

Bylaw

Halton Region has a water conservation bylaw for outdoor water use. The bylaw is applicable from June to August and restricts outdoor watering to odd numbered houses on odd number calendar days and even numbered houses on even number calendar days. The watering times are restricted to between 7-9am and 7-9pm. The bylaw also restricts excess watering or pooling on paved surfaces.

Watering bans can be issued at any time when the Commissioner deems necessary. This bans all outdoor water use.

Children's Water Festival

Halton Region hosted its first annual Children's Water Festival in 2006. It was a three day festival for grades 4 and 5. In 2008, 3,600 children in grades 2-5 attended.

Source: <http://www.halton.ca/ppw/water/waterconservation/default.htm>

City of Hamilton

Indoor Water Efficiency

The City of Hamilton's water efficiency programs are run in partnership with the not-for-profit group Green Venture. The group has produced a downloadable .pdf called "Guide to Wise Water Use" that outlines the various steps for water efficiency in and out of the home. The guide provides a step by step process for homeowners to complete a water use log and an action list to help them reduce their water consumption.

The City held a one day toilet rebate sale on November 15th, 2008. Residents were able to purchase two toilets per household and received rebates of \$50 for ultra-low flush toilets (6L) and \$60 for dual flush and high efficiency toilets. At the event, residents could receive \$20 or \$25 mail-in rebates from the manufacturer(s) on select toilets.

Outdoor Water Efficiency

Outdoor water efficient information is provided in the "Guide to Wise Water Use". The website also provides additional information and a link to a .pdf produced by the Ontario Clean Water Agency on Water Efficient Landscaping.

In summer 2007, the City held a pilot rain barrel sale project. Three types of rain barrels were sold at subsidized prices. 200 litre capacity barrels were sold for \$40 dollars while 500-litre capacity barrels were sold for \$113. The data is being analyzed to determine future events.

Bylaw

The City of Hamilton's Water Works bylaw restricts lawn watering in the summer months to odd numbered houses on odd number calendar days and even numbered houses on even number calendar days. When the City issues a water ban, watering of lawns and gardens is prohibited.

Source:

<http://www.myhamilton.ca/myhamilton/CityandGovernment/CityDepartments/PublicWorks/WaterAndWasteWaterDev/Education/>

City of Kingston

Indoor Water Efficiency

The City of Kingston's indoor water efficient education is produced through the local utilities. The City's website redirects visitors to Utilities Kingston. This website provides education resources on indoor water conservation for residents. The various tips are categorized into bathrooms, kitchens and laundry rooms.

Research from council documents and newspaper articles indicate that the City of Kingston intends to implement a single household and multifamily toilet replacement rebate program in 2009. For the multifamily toilet rebate, the newspaper source states that a \$60 rebate will apply for ultra-low flush toilets (6L).

Outdoor Water Efficiency

The Utilities Kingston website provides information on reducing water use outdoors. The utility offered a rain barrel sales event in 2007 and 2008. In 2007, residents were able to pick up their rain barrels at a predetermined location and pay the \$30 fee through their water bill. A total of 600 were sold. In 2008, the rain barrels were delivered to each address for a charge of \$32 to their water bill. 1,000 rain barrels were sold.

Bylaw

The City of Kingston restricts outdoor water use from June 15 through September 15th, to odd numbered houses on odd number calendar days and even numbered houses on even number

calendar days. The City's engineer is able to issue an outdoor water use ban in which all outdoor water uses shall be prohibited.

Source: <http://www.utilitieskingston.com/water/>

Toilet Rebate Sources:

http://www.cityofkingston.ca/pdf/cityhall/committees/infrastructure/agenda/2008/EIT_Agenda-1108.pdf

<http://www.thewhig.com/ArticleDisplay.aspx?e=1294412&auth=JENNIFER%20PRITCHETT,%20WHIG-STANDARD%20ENVIRONMENT%20REPORTER>

City of London

Indoor Water Efficiency

Similar to Hamilton, the City of London supports a non-for-profit group to promote its water efficiency messages. The CLEAR (Community of London Environmental Awareness Reporting) network provides education on a variety of environmental issues, including water efficiency. The CLEAR network website outlines ways to save water indoors in the bathroom, kitchen and laundry.

Outdoor Water Efficiency

The CLEAR network also provides website information about saving water outdoors.

Bylaw

The City of London Water By-law is in effect each year from June 1 to August 31. Even numbered houses may water on even numbered calendar days only. Odd numbered addresses may use water outdoors on odd numbered calendar days only. No time restrictions are currently in place.

Source: <http://www.london.ca/d.aspx?s=/Water/default.htm>

Niagara Region

Indoor Water Efficiency

The Niagara Region website provides information on how to conserve water indoors. The Water Smart Niagara section also promotes the 'Household Water Efficiency Guide', which can be mailed to resident for free.

Outdoor Water Efficiency

Niagara Region has developed a Smart Gardening guide to provide information on water efficient lawn and garden care which provides information for residents on water efficient

landscapes as well as health issues such as pesticide reduction and West Nile Virus, waste reduction through grass-cycling and storm water management through fertilizer reduction and winter salt alternatives.

In 2007, Niagara Region implemented a summer landscape assessment program pilot project for their Smart Gardening Program. The program sends landscape advisors to households for free property assessments and advice on the various topics, including water efficient landscaping.

Bylaw

The Region of Niagara does not have a regional bylaw, but each municipality is responsible for any outdoor water use bylaws. The town of West Lincoln appears to be the only municipality that has an outdoor water restriction. It runs from June 1st through September 20th each year and restricts lawn watering in the summer months to odd numbered houses on odd number calendar days and even numbered houses on even number calendar days. Watering may not be done between 10am and 6pm.

Other

Niagara Region had partnered with Enbridge in the Spray and Save Program. The program offered a kitchen low-flow pre-rinse spray valve at no cost to full service restaurants to reduce the amount of water and gas wasted during the dishwashing process. However, upon contact Niagara Region representatives were unaware of the program. It is likely that it has passed down to a municipal level, but further information was unavailable at the time of study.

Children's Water Festival

Niagara Region hosts an annual Children's Water Festival for one week in September for school kids in grades 3 and 4. In 2007, the Festival introduced a Public Day that invites all citizens of the region to bring their children for a day of learning.

Source: <http://www.regional.niagara.on.ca/government/initiatives/nwqps/default.aspx>

City of Ottawa

Indoor Water Efficiency

The City of Ottawa's website provides education resources on indoor water conservation for residents. The various tips are categorized into bathrooms, kitchens and laundry rooms.

The city offers residential indoor water efficiency kits free of charge through City service centres. The kits include: a low-flow showerhead, a water efficient kitchen aerator and a water efficient bathroom aerator, a toilet displacement device, a flow test bag for residents to test existing showerhead and faucet water use.

The City also partners with Enbridge Gas for door-to door distribution as part of Enbridge's demand-side reduction program for gas consumption. Each kit contains the following elements: hot water pipe foam insulation, a low-flow showerhead, a water efficient kitchen aerator, a

water efficient bathroom aerator, a toilet tank bank and bilingual water efficiency material. Kits are delivered to both Enbridge customers and non-Enbridge customers.

Water efficiency kits are distributed to social housing services upon request and limited to 10% of the number of units per facility. Kits contained the following elements: a low-flow showerhead, a water efficient kitchen aerator, and a water efficient bathroom aerator. In a June 2008 report, staff recommended increasing the number of kits delivered from 10% to 50% of units.

Toilet Rebate Program

In 2007, the City implemented a toilet rebate program. The program ruled a limit of one toilet per household. Recently, City staff recommended removing the limit and allowing households to purchase up to two toilets. The process requires residents' to submit applications to the City for approval of the rebate. A \$60 rebate is available for single-flush 6L and dual flush 3/6L toilets. A \$75 rebate is offered for high-efficiency toilets that flush with 4.8L or less.

Outdoor Water Efficiency

The City of Ottawa's website provides details on reducing outdoor water use and includes instructions on making your own rain barrel. The site also provides a brief list of plants to use in the garden that are water efficient.

Pilot Water Timer Project

Approximately 100 sprinkler timers were distributed to determine lawn watering habits, the level of interest in controlling outdoor water use and the suitability of the water timer product. The program had pre-installation surveys with follow up surveys.

High Volume User (HVV) Program

In 2007, the City introduced a High Volume User program where Ottawa businesses and institutions were given an opportunity to apply for a rebate to implement water efficiency methods. A maximum rebate amount of \$10,000 dollars was set at each facility to ensure the greatest number of rebate opportunities.

Source: <https://ottawa.ca/residents/water/waterwise/strategy/>

Region of Peel

Indoor Water Efficiency

The Region of Peel website provides education resources on indoor water conservation for residents. The various tips are categorized into bathrooms, kitchens and laundry rooms. The Region provides rebates of \$60 for 6 L/flush toilet replacements and \$100 rebate for high efficiency toilet models that use 4.8L/flush and less to residents.

The Region also offers an indoor water efficiency kit that comes with toilet displacement bags, leak detection tablets, kitchen and bathroom faucet aerators, and a low flow showerhead. The kits cost \$5 for residents.

The Peel Living Water Efficiency Retrofit Project installed water efficient measures including low flow showerheads, vanity tap aerators and kitchen tap aerators along with approximately 2,000 toilets in 17 buildings in 2005-2006. The pilot project conducted pre-data with two sets of post-data to gather information on the success of the retrofits.

Outdoor Water Efficiency

The Region of Peel offers free lawn and garden consultations for residents. A team of two students visit homeowners during the summer months to provide them with information on water-wise lawn care practices, water efficient gardens; weed and pest control and leave a detailed information kit.

The Region of Peel's website also provides information on outdoor water conservation. Residents can purchase an outdoor water conservation kit for \$15 which includes: a mechanical water timer, a trigger hose nozzle, hose coupling filter washers, hose repair and coupling mender and a rain gauge. The Region also provides information on purchasing rain barrels and sells them for \$50.

Peel Region encourages residents to practice 'Water Wise Wednesdays' where all residents, businesses and institutions are asked to avoid watering lawn and gardens on Wednesdays from May 1 to September 30.

Bylaw

None

Children's Water Festival

Since 1996, the Region of Peel has hosted a children's water festival in May. Students from grades 2 through 5 are invited and the festival opens its door to all residents on the Saturday of the event for Community Day. The event uses 500 high school volunteers to assist with the festival.

Industrial, Commercial and Institutional Program

Participants may receive a free water audit and corresponding report on their water saving potential. As part of the program, they also receive a one-time rebate of \$0.25 per litre of water saved per average day, or 50% of the cost for the process change to a maximum of \$250,000 (based on verified water savings).

ICI properties are also offered outdoor irrigation system efficiency tips, a pre-rinse spray valve replacement program for food services facilities and a toilet replacement program. The pre-rinse spray valve program offers recipients a free high velocity spray valve plus installation. Toilet rebates range from \$60 to \$140 dollars. Toilets must replace inefficient (13L or 20L) toilets and be selected from a Peel Approved list.

Source: <http://www.region.peel.on.ca/pw/water/conservation/>

The City of Peterborough

Indoor Water Efficiency

Similar to Hamilton and London, the City of Peterborough runs its water efficiency programs in partnership with a non-for-profit group, Peterborough Green-up. The website provides downloadable fact sheets on low flow toilets and water efficient washing machines. The group also provides free showerheads and faucet aerators to residents.

Outdoor Water Efficiency

The website has an extensive list of fact sheets for residents to download on a variety of water efficient gardening topics. The group also provides rain barrels at a subsidized cost of \$72 for residents and \$88 for non-residents.

Bylaw

During the months of June, July and August, lawn watering is permitted only from 7am to 10pm. Additionally, on even calendar dates at only those municipal addresses ending with even numbers and odd calendar dates at only municipal addresses ending with odd numbers.

Children's Water Festival

The City of Peterborough hosts an annual Children's Water Festival each year since 2001. Over 1300 school kids from grades 2 through 5 attend the three day festival which is assisted by various community volunteers.

Source: <http://www.peterboroughutilities.ca/home.htm>

The City of Toronto

Indoor Water Efficiency

The City of Toronto provides a host of rebate programs for indoor water efficiency. For residents, the City offers a \$60 rebate for 6L/flush toilet replacements and a \$75 rebate for replacement with high efficiency (4.8L or dual flush) toilets. The City provides free indoor water efficiency kits that include a low flow showerhead and faucet aerators.

For industrial, commercial and institutional properties (ICI), the City offers a rebate program for toilet replacements. The City pays \$60 per low flush 6L/flush toilet installed, \$75 per high efficiency (4.8L or dual flush) toilet installed, \$100 per 3.8 L/flush toilet or urinal, \$150 per rear exit 6L/flush or less toilet installed and up to \$150 per 6L/flush or less flush-valve toilet.

Toronto offers residents a \$60 rebate when they replace top loading washing machines with water-efficient front loading washing machines.

The City also offers a multi-unit and business rebate program for the purchase and replacement of top loading washing machines with water efficient front loading washing machines. If the washers are leased, the property owner receives \$100 rebate per machine and the route operator who holds the valid lease agreement receives \$25 per machine.

Residential Retrofit Kit

Residents may purchase a \$10 indoor water efficiency retrofit kit at community events; Toronto's publication centre; and through mail-order. The kit includes high-efficiency showerhead, kitchen swivel aerator, two bathroom aerators, leak detection tablets, teflon tape and a set of installation instructions.

Outdoor Water Efficiency

Summer WaterSaver Visits are offered free of charge to residents of Toronto. Trained Landscape Advisors visit homeowners from May through to September to provide them with information on water-wise lawn care practices, water efficient gardens, natural weed and pest control and leave a detailed information kit, including an educational DVD. The program also hosts seminars about water efficient landscaping. The City has developed partnerships with three garden centres in Toronto to create water efficient demonstration gardens with interpretive signage.

Residents can purchase rain barrels from the City during a series of Environment Days hosted by local City Councillors. In 2008, rain barrels sold for \$70.

Bylaw

None

Other

The City of Toronto has partnered with Enbridge in the Spray and Save Program. This program offers a kitchen low-flow pre-rinse spray valve at no cost to full service restaurants to reduce the amount of water and gas wasted during the dishwashing process..

The City provides an ICI buyback program for businesses that undergo a water audit and take measures to reduce their water consumption. The City will buyback water at a rate of \$0.30 per litre saved. As of October 31st, 2009 the buy back program will be completed. Instead, the City of Toronto will implement an Industrial Water Rate program.

The Industrial Water Rate Program will provide ICI facilities with a water rate that is 20 percent less than the General Water Rate approved by Toronto Council for the 2008 year. As of January 1, 2009 all qualifying industrial water users who submitted a Water Conservation Plan by the October 31, 2008 deadline will be placed on the Industrial Water Rate when consumption exceeds 6,000 m³.

As of March 31, 2009 all industrial water users wanting to receive discounted rates must submit a Water Conservation Plan; by July 1, 2009 all properties receiving a discounted rate at that time must submit a progress report; additionally, all properties who met the March 31st deadline for submission will begin receiving the discounted industrial rate. The progress report is intended to qualify users for rebates in future years.

Source: <http://www.toronto.ca/watereff/index.htm>

The Region of Waterloo

Indoor Water Efficiency

The Region of Waterloo provides residents with a \$40 rebate for the purchase of 6L/flush, ultra-low flow toilets to replace older models. The rebate is increased to \$60 if the resident replaces an old toilet with a high efficiency (4.8L or less) or dual flush toilet. The website also provides additional information on saving water indoors.

Outdoor Water Efficiency

Waterloo offers an annual rain barrel sales event to residents where they may purchase barrels at a subsidized cost of \$30 per barrel. The Region also offers a series of water efficient gardening seminars that teach residents the use of plants, configurations and materials suitable to the natural conditions of their lawns and gardens.

Additionally, the Region of Waterloo developed the Greenbrook Demonstration Gardens as well as a garden at 150 Frederick Street in Kitchener to display alternative landscaping using water-wise plants in place of the traditional lawn.

Bylaw

Waterloo's bylaw restricts outdoor water use in the months of June through September to odd numbered houses on odd number calendar days and even numbered houses on even number calendar days between the hours of 7 and 10 am and 7 and 11 pm. A stage two water ban restricts water use outdoors in situations where pumping capacity is limited. Residents are permitted to water their lawns once a week, with dates for watering determined by street address during this ban. At stage three, the majority of outdoor watering is restricted.

Children's Water Festival

The Region of Waterloo hosts an annual Children's Groundwater Festival in May. The festival welcomes over 4000 children to participate in the week-long festival. The public is invited to attend on the Saturday where an admission is charged. The festival has been running for 12 years.

Other

Water Use Reviews

The Region's Water Efficient Technology (W.E.T.) Funding program offers free water use reviews to businesses. If they wish to proceed further, they can have a third party water audit, which the region will cost share 50/50 up to \$20,000. If the business chooses to implement advised water efficiency measures, they may be eligible for rebates and additional financial incentives.

Pre-rinse Spray Valve Replacement Program

The Region of Waterloo offers a kitchen low-flow pre-rinse spray valve replacement program at no cost to full service restaurants to reduce the amount of water and gas wasted during the dishwashing process.

Source:

<http://www.region.waterloo.on.ca/web/Region.nsf/vwSiteMap/E6533AB22C888AB385256B0300596181?OpenDocument>

City of Welland

Indoor Water Efficiency

The City of Welland offers a \$60 rebate for residents who replace old toilets with water efficient (6L/flush or less) models selected by the City. The City also offers a \$100 rebate when residents replace top-loading washing machines with front-loading, water efficient models.

Outdoor Water Efficiency

The City of Welland website provides information on water efficient gardening and lawn care. In 2008, The City held a rain barrel sales event offering two types of rain barrels,

315L and 500L. As a municipality within Niagara Region, Welland is a partner with the Smart Gardening Home Advisor Pilot Program. As previously described, the advisor program sends trained lawn care advisors to households free of charge. Residents receive water efficient lawn and garden care advice.

Source: <http://www.city.welland.on.ca/Conservation/index.asp>

York Region

Indoor Water Efficiency

Between 1998 and 2004, York Region's Water for Tomorrow program replaced toilet flappers and showerheads in residential homes built before 1996 free-of-charge. 250,000 toilet flappers and 104,000 showerheads were installed. The program was discontinued as all homes targeted (built prior to 1996) were serviced. A maintenance program which provides free replacements for any malfunctioning flappers or showerheads is ongoing. The program also provided ICI audits and a buyback program that provides a rebate of \$0.40 per litre of water saved. It is anticipated that this program will return in 2009.

York Region currently offers toilet rebate events during the year in partnership with local retailers. Residents receive \$60 rebates for an ultra-low flush (6 litre) or \$75 for a high efficiency or dual flush toilet. In 2009, York Region will implement an on-going toilet rebate program.

Outdoor Water Efficiency

York Region has created an extensive outdoor water efficiency program through the Water for Tomorrow program, known as the Summer Water Use Reduction Program. The Region provides residents a landscape audit, free of charge. Trained landscape advisors visit homeowners from May through to September to provide them with information on water-wise lawn care practices, water efficient gardens, weed and pest control and leave a detailed information kit, including an educational DVD, rain gauge, water efficient plant seeds and a 25% off coupon for the purchase of three water efficient plants for three bags of mulch at participating garden centres. The program also hosts a series of seminars about water efficiency and partners with various organizations to participate in water conservation events and attends other events such as home shows and community fairs.

The program has partnered with six garden centres to provide point-of-purchase (POP) educational materials, water-efficient demonstration gardens and workshops. The workshops are hosted at the garden centre and participants receive incentives such as coupons or free water efficient perennials.

York Region has created 22 demonstration gardens, 6 at garden centres and 11 with partnering community groups and associations throughout the Region. Each garden is equipped with interpretive signage which is provided by the Region. Annual maintenance funds of \$500 are provided by the Region for each demonstration garden.

Bylaw

Each municipality within York Region has their own outdoor water use bylaw that restricts outdoor water use to odd numbered houses on odd number calendar days and even numbered houses on even number calendar days. The times for watering vary between each municipality from 6 or 7am to 9 or 10am and 6 or 7pm to 9 or 10pm. New sod, trees, shrubs and hand watering are exempt.

The Region of York has the opportunity to issue an outdoor water use ban to each of its municipalities. A stage one ban outlines that all persons are requested to refrain from using municipal water from a hose, pipe, sprinkler or permanent irrigation system for the purpose of: watering lawns and gardens; washing of vehicles, sidewalks or driveways; filling swimming pools, on a volunteer basis. During a stage two ban, no person shall use municipal water from a hose, pipe, sprinkler or permanent irrigation system for the purpose of: watering lawns and gardens; washing of vehicles, sidewalks or driveways; filling swimming pools and is a mandatory ban.

Children's Water Festival

York Region hosts a water festival each year for over 5000 children from grades 4 and 5. The event is held for one week (five days) in May and uses volunteers from high schools to help run the activities.

Other

The Water for Tomorrow program has its own website (www.waterfortomorrow.com) that offers extensive information on indoor and outdoor water efficiency.

Source: <http://www.waterfortomorrow.com>

CANADIAN MUNICIPALITIES

Calgary

Indoor Water Efficiency

The City of Calgary offers a \$50 per toilet rebate for the replacement of old 13L or 20L toilets with an ultra-low flush (6L) model. They have also participated with Home Depots to host weekend toilet truckload sales at Home Depot stores in the City.

The City sells an indoor water efficiency kit including a low-flow showerhead, kitchen swivel aerator; bathroom aerators (2); toilet tank bags (2); a package of leak detection tablets; and a roll Teflon tape. The cost is \$15 plus shipping if applicable. On its website, the City offers an indoor water audit worksheet as well as instructions on water conservation tips.

Outdoor Water Efficiency

Educational materials are available on the City's website on water efficient landscaping and irrigation systems. The city hosts an annual rain barrel sale in partnership with Clean Calgary Association. The rain barrels are sold at a cost of \$60 per barrel. The City also provides an outdoor water efficiency kit which includes a garden hose nozzle; automatic sprinkler timer; and rain gauge. The kit is sold for \$20 plus shipping if applicable.

For irrigation systems, the City supports a certification program to designate properties as a Water Managed Site. A professional auditor from the Irrigation Association will visit properties and assess their water efficiency requirements. If deemed qualified, properties are certified and receive designation.

Bylaw

On August 1st, 2005 the City of Calgary adopted a bylaw that requires all new homes and commercial construction, including renovations that require a plumbing permit to have low water use fixtures in place including: toilet (bowl and tank) no greater than 6L per flush, urinals no greater than 3.8L per flush, "tank type" models will not be permitted, public restroom faucets no greater than 1.8 litres per minute, and once through cooling systems will no longer be allowed, with exception to emergency backup systems for computers.

The City also has an outdoor water use bylaw with four stages. This bylaw is enacted as appropriate by the Director of Water Resources. Watering of gardens, trees and shrubs (lawns excluded) with spring-loaded type nozzles with automatic shut-off connected to a hose is allowed for stages one and two, but is restricted for stages three and four.

Watering of gardens, trees and shrubs (lawns excluded) with sprinkler connected to hose:

Stage One - One day per week to a maximum of 2 hours per day within the hours of 4 am to 7am, 9 am to 11am and 7pm to 10 pm.

Stage Two - One day per week to a maximum of one hour per day within the hours of 4 am to 7am, 9 am to 11am and 7pm to 10 pm.

Stages three and four have a complete ban on watering with sprinklers.

The bylaw restricts washing down sidewalks, walkways, driveways, exterior building surfaces or other outdoor surfaces at all four stages, car washing, and filling of decorative water fountains or ponds. Filling pools and hot tubs is allowed in stages one and two but is restricted in stages three and four. There are exceptions for new sod planted within 21 days and seed planted within 45 days as well as for new trees and plants.

ICI Water Audit Program

The City offers water audits free of charge to commercial properties. Professional water auditors review the practices at each facility and provide recommendations in a report.

Source:

http://www.calgary.ca/portal/server.pt/gateway/PTARGS_0_0_780_237_0_43/http%3B/content.calgary.ca/CCA/City+Hall/Business+Units/Water+Services/Water+Conservation/Water+Conservation.htm

UNITED STATES MUNICIPALITIES

Austin, Texas

Indoor Water Efficiency

The City of Austin has an extensive rebate program that includes rebates for toilets, clotheswashers, rainwater harvesting, irrigation systems, water efficient landscaping and industrial/commercial incentives.

The toilet rebate program provides options for a free toilet replacement if toilets being replaced were installed before 1996. Additional rebates provide up to \$200 rebate for replacing pre-1996 toilets with qualifying HET (<1.6 gpf) models; up to \$50 for replacing 1.6 gpf toilets with qualifying HETs; and up to \$50 for Installing HETs in new construction. The program also provides a \$60 rebate if residents require professional installation of their toilet(s).

The City of Austin offers a \$100 rebate for the purchase and installation of a Pressure Regulating Valve (PRV) for residential water customers. For multi-family customers, the rebate is \$100 per unit up to a maximum of \$500 per property (parts & labour).

Residents with underground sprinkler systems who use more than 25,000 gallons per month in the summer qualify for an irrigation audit. A City water auditor will check the system(s) and determine an efficient watering schedule.

The City offers a rebate of up to \$500 on the cost of installing a larger capacity rainwater harvesting system (over 300 gallons). Applications must be approved before equipment is purchased. It also offers a \$150 rebate on the purchase of high efficiency clothes washers (\$100 water rebate and \$50 energy rebate). Through the commercial Wash Wise program, businesses can receive rebates of up to \$250 (150 for water and 100 if gas water heated).

Outdoor Water Efficiency

In Austin, summer water use reduction is the priority. In addition to the rebate programs listed above, the City has an extensive education program focused around its website.

Bylaw

For single family homes watering days are determined by street address, with odd numbered addresses on Wednesday and/or Saturday and even numbered addresses on Thursday and/or Sunday. For commercial and multi-family customers watering may be done on Tuesday and/or

Friday. Watering days apply year round for commercial and multi-family customers, while residential properties watering days are mandatory from May 1st until September 30th.

Automatic irrigation systems may not water between 10 am and 7 pm year round. Between May 1st and September 30, properties may not use hose-end sprinklers between 10am and 7pm. Hand held hoses or buckets are allowed any time of day any day during the week.

If necessary, Austin has a three stage system where water restrictions are gradually increased in the case of drought or other water capacity limitations. The City also has bylaws covering lawn irrigation, rain water harvesting and storm water management.

Children's Water Festival

Although the City has an excellent youth education program it does not offer a Children's Water Festival.

Source: <http://www.ci.austin.tx.us/watercon/default.htm>

Denver, Colorado

Indoor Water Efficiency

Denver Water's indoor water efficiency program offers rebates for toilets and clothes washers. Low-flush toilet models (1.6 gpf) receive a \$25 rebate while high efficiency toilets (<1.6 gpf) receive a \$125 rebate. High efficiency clothes washers receive a \$150 rebate.

Outdoor Water Efficiency

Similar to the City of Austin, summer water use reduction is the priority. In addition to the rebate programs listed above, the City has an extensive education program focused around its website that educates the public on rainwater harvesting, irrigation systems, and water efficient landscaping. It should be noted that Denver Water first used and has a trademark on the term "Xeriscaping".

Water Billing Rate Schedule

Like the City of Barrie, Denver has a ‘blocked’ schedule where rates increase as consumption increases. For example:

Single-Family Residential Customers:

	Monthly Billing/ Usage (Gallons)	Bimonthly Billing/ Usage (Gallons)	Rate per 1,000 Gallons
Block 1	0 - 11,000	0 - 22,000	\$1.91
Block 2	12,000 - 30,000	23,000 - 60,000	\$3.82
Block 3	31,000 - 40,000	61,000 - 80,000	\$5.73
Block 4	Over 40,000	Over 80,000	\$7.64

Single-Family Residential Irrigation

	Monthly Billing/ Usage (Gallons)	Bimonthly Billing/ Usage (Gallons)	Rate per 1,000 Gallons
Winter	All usage	All usage	\$0.92
Summer	All usage	All usage	\$3.68

One difference between the City of Barrie and Denver is that Denver has different rates for in-city and out of city customers. Also, Denver has separate rates for non-irrigation and irrigation-only taps; and separate rates for winter and summer billing for non-residential customers. More information on 2009 rates can be found at:

<http://www.denverwater.org/rateinfo/rates.html>

Bylaw

The City has bylaws covering lawn irrigation, rain water harvesting and storm water management. Lawn watering is not allowed between 10am and 6pm between May 1st and September 1st. There are no watering days established, but users are asked to water no more than three days per week.

Children’s Water Festival

Although the City has an excellent youth education program it does not offer a Children’s Water Festival.

Commercial, Industrial, & Institutional Performance Contracting Program

ICI customers of Denver Water can receive up to \$40,000 for improving the efficiency of their processes. Projects earn \$21.50 for every 1,000 gallons of water saved over a one-year period. Projects must meet the minimum savings requirement of 300,000 gallons per year in order to qualify.

Commercial Rebates

Denver Water pays new construction multi-family customers to install sub-metering devices for each individual residential unit. The City pays commercial multi-tenant buildings for both new construction and for retrofits installed at each commercial unit. The rebate is \$40 each for flow meters with one rebate per unit.

Denver Water offers a rebate of \$50 for each high efficiency urinal installed, including both flushing and non-water urinals, as approved by the California Urban Water Conservation Council. Denver offers commercial customers a \$25 rebate per ½ gpf urinal diaphragm kit.

Restaurants who replace toilets with 3.5 gallons per flush or more are eligible to receive a \$100 rebate if replaced by an approved 1.6 gpf toilet, and \$200 if replaced by a high efficiency toilets, which use an average of 1.28 gallons per flush.

Denver Water offers a \$25 rebate per toilet to commercial customers who replace old high-water-using toilets with qualifying low-flow toilets that use 1.6 gallons per flush (gpf) or less. Those who replace with high-efficiency toilet (HET) models that use an average of 1.28 gallons per flush or less receive a \$125 rebate.

The Single-Pass Cooling Rebate offers a rebate of \$450 for commercial customers that replace single-pass water cooled equipment with air-cooled options, or install a closed-loop system that recycles cooling water.

For certified car wash locations, Denver offers a rebate of \$1 per nozzle, up to a maximum of \$300 annually. A rebate of \$100 is provided for installation of weep management systems.

Denver Water offers a \$500 rebate per conductivity controller for sump make-up in existing cooling towers with no conductivity controller or a malfunctioning controller. An additional rebate of \$50 per water meter installed to monitor tower make-up and bleed-off is available.

A \$150 per machine rebate is offered for each domestic-sized coin-operated laundry machine. The Consortium for Energy Efficiency (CEE) list of approved commercial laundry machines is used to determine eligibility of specific models.

A \$350 rebate is offered per steamer for companies that replace atmospheric steamers with approved boiler-less units.

Source:

<http://www.denverwater.org/>

San Francisco, California

Indoor Water Efficiency

San Francisco Public Utilities Commission's (SFPUC) water efficiency program offering rebates for toilets, clotheswashers, rainwater harvesting, irrigation systems, water efficient landscaping and industrial/commercial incentives.

Residential customers are eligible for cash rebates of up to \$125 for the purchase of qualifying high-efficiency toilets. If replacing an older high-flow model, residents may receive up to a \$200 rebate. Commercial customers are eligible for cash rebates of up to \$200 for toilets and up to \$300 for the purchase of high-efficiency urinals. As of January 1st, 2009, the SFPUC no longer provides rebates for ultra-flow flush (1.6gpf) toilets.

As of January, 2009 the SFPUC website states that staff will begin a pilot program to install 2,000 high-efficiency toilets (HETs) in low-income families and small businesses. The new HETs (<1.6 gpf) will replace older high volume toilets.

Outdoor Water Efficiency

In April, 2009 the SFPUC will partner with Garden for the Environment to offer a series of free organic gardening workshops. Guests will be taught how to implement a sustainable landscape design, plant selection, efficient watering practices, water-wise irrigation systems, improvements to soil, drainage and less-toxic gardening techniques.

Bylaw

According to the SFPUC, there is currently no restriction on watering times or dates. However, residents have the ability to report water wasters. Also, in the case of a drought, the SFPUC will issue notice to limit water usage.

ICI Program

The City offers a 'Water-Wise Evaluation' service where businesses and institutions may have a technician visit to review consumption history, check toilets, provide free water-saving devices teach water meter reading techniques and provide a follow up report. Businesses may then become eligible for commercial rebates.

Children's Water Festival

The City does not have a Children's Water Festival.

Source: <http://sfwater.org/home.cfm>

Southern Nevada Water Authority

Indoor Water Efficiency

The Southern Nevada Water Authority (SNWA) provides free indoor water efficiency kits for residents. These kits include; kitchen faucet fixtures, bathroom sink aerators (2), water flow testing bag; leak detection tablets, thread-sealing Teflon tape, water-efficient shower head.

Outdoor Water Efficiency

SNWA will rebate customers \$1.50 per square foot of grass removed and replaced with desert landscaping up to the first 5,000 square feet converted per property, per year. Beyond the first 5,000 feet, SNWA will provide a rebate of \$1 per square foot. The maximum award for any property in a fiscal year is \$300,000.

They also offer discount coupons for local carwashes that treat and reuse the water. Rebates between \$50- \$200 or 50% (whichever is less) are available for the purchase of a pool cover.

Rebates are also provided for outdoor irrigation technologies including \$25 or 50% (whichever is less) for the purchase of a rain sensor and \$200 or 50% (whichever is less) for the purchase of an ET controller. Additional rebates are provided for pool covers (\$50 or 50 percent off the purchase of pool cover, whichever is less; or \$200 or 50 percent off a permanent, mechanical pool cover).

Bylaw

Many ordinances have been put in place, or are currently under review that address the excessive use of outdoor water. These include the limitation of turf on all front yards in new homes and only 50% of turf in back yards. Seasonal restrictions on watering also exist throughout the year.

Ordinances for water waste in Southern Nevada include restrictions for: any water that sprays or flows off properties, watering outside of assigned watering day, failure to comply with drought restrictions, using sprinklers from 11 a.m. to 7 p.m. from May 1 through Sept. 30, failure to repair a malfunction in irrigation systems or supply line within 48 hours, failure to discharge swimming-pool or spa drainage into a public sanitary sewer, if available.

Other

Businesses are eligible for rebates for water saving technologies including \$25 per 1,000 gallons saved for the purchase of consumptive water saving technologies, or \$8 per 1,000 gallons saved for the purchase of non-consumptive water saving technologies. Businesses are also eligible for landscape rebates for turf removal. The SNWA also advocates a linen exchange program for hotels, where linens are left in rooms for three days unless requested by the guest. They also have a free irrigation review service where technicians visit properties to review usage and make recommendations for reductions.

Source: http://www.snwa.com/html/cons_index.html