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Region of Peel Working for you

**REPORT** General Committee

For Information

DATE: June 1, 2010

REPORT TITLE: WATER EFFICIENCY PLAN: ANNUAL UPDATE ON 2009 IMPLEMENTED WATER EFFICIENCY MEASURES CAPITAL PROJECT 08-1585

FROM: Dan Labrecque, Commissioner of Public Works

# OBJECTIVE

The objective of this report is to update Regional Council on 2009 implemented water efficiency measures, and examine the future direction of water conservation initiatives within Peel.

# **REPORT HIGHLIGHTS**

- The Water Efficiency Plan was developed and implemented in 2004/2005.
- Water efficiency measures have contributed to an average annual day demand (AADD) savings of 13.1 million litres per day since 2004. This represents a decrease of 2.4 per cent compared to the average annual day demand in 2005.
- Five water efficiency initiatives were run in 2009: the Residential Toilet Replacement Program, the Landscape Consultation Program, Pre-Rinse Spray Valve Replacement Program, Industrial Commercial and Institutional Indoor Water Audit Program, and Toilet Replacement Program for Businesses. These programs contributed to an average annual day demand savings of 4.27 million litres of water per day.
- The number of rebates provided for water efficient toilets increased dramatically in 2009. This increase was likely due, in part, to the Federal Home Renovation Tax Credit.
- First quarter results for 2010 indicate that the quantity of toilet rebates received remains higher than expected, resulting in funding pressure for the project. This situation will be monitored closely and reported to Regional Council as appropriate.
- Effective April 1, 2010, Peel no longer offers \$100 rebates under the Residential Toilet Replacement Program. The rebate amount for all Peel Approved high efficiency toilets is now \$60. This rebate reduction will alleviate some of the funding pressure in time.

# DISCUSSION

# 1. Background

The Water Efficiency Plan (WEP) was developed and approved in 2004/2005 in response to ever-increasing demands on the water and wastewater treatment systems. Implementing the Water Efficiency Plan helps reduce excessive water use, defers the cost of water and wastewater infrastructure expansion, and makes good environmental sense. To detail the progress of the Plan and implemented water efficiency measures, an annual report is

submitted to Regional Council. This report highlights the achievements of the Water Efficiency Plan to date and summarizes water savings realized in 2009 and to date in 2010.

## 2. Accomplishments to Date

Since the Water Efficiency Plan was approved, several water efficiency initiatives aimed at both the residential and business sectors have been implemented. These initiatives have contributed to a combined water savings of 13.1ML/day; equivalent to more than two times the average daily consumption of the Region's largest ICI customer.

Figure 1 illustrates yearly water savings in ML/day since the start of the program in 2004.



Figure 1

Increasing yearly water savings demonstrates the acceptance of the Water Efficiency Plan in the Region, as well as the increased environmental awareness of residents. The success of the Water Efficiency Plan has also been recognized on a national scale, with the Region receiving the 2007 Sustainable Communities Award for Water Efficiency from the Federation of Canadian Municipalities (FCM).

The success of the Plan is a result of several water efficiency measures. Table 1 shows the detailed breakdown of water savings by initiative for 2009 and 2010 to date.

RW-B1 -3-

## Table 1

Water Efficiency Measure	2009 Water Savings (L/day)	2010 Water Savings to Date (L/day)
Residential Toilet Replacement Program	2,877,680	1,514,000
Outdoor Lawn and Garden Consultations	12,500	0
Toilet Replacement Program for Businesses	56,070	39,000
Pre-rinse Spray Valve Program	613,630	65,000
Indoor Water Audit Program	713,670	380,000
TOTAL	4,273,550	1,998,000

Through securing water savings and alleviating pressure on the water and wastewater treatment processes, implemented water efficiency measures have also reduced energy consumption and associated greenhouse gases emissions. Reducing energy consumption and greenhouse gas emission helps combat climate change and preserves our environment, health and economy.

Table 2 summarizes the impact of 2009 water efficiency measures on energy savings and greenhouse gas emissions.

### Table 2

2009 Water Efficiency Measures	2009 Water Savings (L/day)	Estimated Energy Savings/Day (kW/h)	Estimated Greenhouse Gas Savings/Day (tones CO2)
Residential Toilet Replacement Program	2,877,680	3,734	0.731
Landscape Consultation Program	12,500	6	0.002
Toilet Replacement Program for Businesses	56,070	73	0.014
Pre-rinse Spray Valve Program	613,630	796	0.156
Indoor Water Audit Program	713,670	926	0.181
TOTAL	4,273,550	5,535	1.084

A detailed summary of 2009 initiatives is included in Appendix I.

# 3. 2009 Program Highlights

In 2009, five water efficiency measures including the Residential Toilet Replacement Program, the Outdoor Lawn and Garden Consultation Program, Pre-Rinse Spray Valve Program, Industrial Commercial and Institutional Indoor Water Audit Program, and Toilet Replacement Program for Businesses contributed to an Average Annual Day Demand savings of 4.27 million litres. This represents an increase of nearly 50 percent in water savings compared to 2008, and is the highest yearly savings achieved by the Plan to date.

PW-B1-4-

While the success of the Water Efficiency Plan is due to all of its water efficiency measures, this report will highlight only those programs that saw either increased participation or significant changes in 2009.

# a) Toilet Replacement Program

Much of the increased success of the Water Efficiency Plan in 2009 can be attributed to the Toilet Replacement Program. In 2009 a record number of rebate applications were issued; 32 per cent more than in 2008. The ratio of high efficiency toilets (HETs) to six litre toilets rebated also increased in 2009 and accounted for more than 50 per cent of all rebates issued.

Figure 2 shows the number of toilet rebates issued by type since 2005.



### Figure 2

Figure 2 shows that high efficiency toilets (HETs) have increased in popularity since the start of the program. The increase in high efficiency toilet rebated is likely due to a combination of factors including the decreasing price of HET models, the increasing selection of HETs, increasing consumer product confidence in water efficient fixtures, and other government incentive programs such as the Federal Home Renovation Tax Credit and the Home Energy Audit program.

To account for the increased availability of water efficient toilets, and to help educate the public about differences in performance, the Uniform North American Requirements were adopted as criteria for the Peel-Approved list in 2009. The Uniform North American Requirements stipulate that toilets: flush volumes be non tamperable, flush a minimum of 350g of test material, and contain chemical resistant trim components. This modification was made to ease the 2010 transition to WaterSense requirements described in Appendix II.

PIN-B1-5-

# b) Landscape Consultations

In an effort to enhance the Landscape Consultation Program, leading edge market research was incorporated into the program that considers residents' attitudes towards their landscape and outdoor water use. Based on the market research, the landscape consultation process was modified to focus on the creation of personalized landscape designs that fuse traditional design concepts with eco-gardening innovations. The new personalized fusion landscape designs resonate more fully with residents as they incorporate residents' unique and personal visions of their landscape and achieve many environmental benefits including saving water and reducing storm water runoff.

The enhanced Landscape Consultation Program was well received in 2009 with a total of 1200 fusion Landscape Consultations completed by summer students.

# c) Clarkson Sustainable Neighbourhood Study

A long term study was initiated in 2009 to monitor the effect of fusion landscaping and sustainable residential landscape design on outdoor water use. The study area is located in the Clarkson neighbourhood of Mississauga, and is bounded by Orr Road to the south, South Sheridan Way to the north, Clarkson Road to the east and Southdown Road to the west. The study includes a maximum of five fusion demonstration gardens constructed in the front yards of single family homes. Single family homes were selected based on a thorough application and billing assessment process.

Baseline water demand data for the neighbourhood was established using 2009 water billing data. To monitor the effects of fusion landscaping on the community, water data will continue to be collected for five years.

### d) Industrial, Commercial and Institutional Landscape Irrigation Audit - Pilot Project

In the spring of 2009 a pilot project commenced to identify potential outdoor water savings that can be achieved through irrigation system modification for the Industrial, Commercial and Institutional (ICI) sector. The study examined ICI summer water users and explored how summer water demands can be reduced through optimizing current timer based irrigation systems, upgrading to smart controllers, or combining smart controllers with optimized systems.

Based on the results of the post monitoring data from eight pilot facilities the total maximum water savings resulting from system optimization and smart control systems at the eight facilities is 44,344,000 litres per year.

The program is expected to be launched to all Peel businesses in 2010.

# 4. 2010 Program Highlights

Water savings resulting from the Water Efficiency Plan remain steady, with an average annual day demand savings of 1.34 ML in the first quarter of the year. To keep water efficiency initiatives current and relevant to Peel's population, the measures are constantly being updated to take into consideration emerging technologies and industry trends. A detailed summary of 2010 initiatives is included in Appendix II.

PW-B1-6-

## 5. Industry Trends in Water Efficiency

Since the Water Efficiency Plan was implemented in 2005, large strides have been made in encouraging water efficiency. Consumers are becoming increasingly aware of environmental issues and are more frequently considering the impact of their purchasing decisions on the environment. This has resulted in manufacturers creating products with more consideration for the environment.

The emergence of more consideration for water efficiency initiatives demonstrates the positive impact that water efficiency plans such as the Region's have had on the industry and their success in promoting water conservation through lobbying government and increasing consumer awareness.

In 2010 trends in water efficiency are particularly noticeable in the toilet industry. A comprehensive review of water efficiency trends is outlined in Appendix III. These trends include:

- □ Interim Changes to the Ontario Building Code;
- Changes to Canadian Standards Association (CSA) Standard B45 for plumbing fixtures;
- The addition of a Green Plumbing and Mechanical Code Supplement to the International Association of Plumbing and Mechanical Official's Uniform Plumbing and Mechanical Codes;
- □ The Ontario Water Opportunities Act;
- Growing consumer demand for water efficient and environmentally friendly products;
- Proposed by-law changes to promote conservation;
- □ Increased media coverage of events; and,
- □ Increased public education about climate change and greenhouse gas emissions.

### 6. Interagency Collaboration

The Region of Peel is not the only municipality or agency promoting water conservation and environmental sustainability. The Region also collaborates with several agencies to promote more sustainable practices and convey Water Smart Peel messaging.

A sample of the agencies that the Region collaborates with on environmental initiatives is described in Appendix IV, Table 1.

# 7. Future Direction

To acknowledge the strides in water conservation over the past five years, Water Smart Peel is working to update the Water Efficiency Plan (WEP). The plan will be updated by identifying new and current water efficiency measures and re-evaluating water savings targets. Updating the WEP will permit the Region to continue to inform residents and business owners about current best water efficiency practices and also align with the Regional goal to protect, enhance, and restore the environment.

# **FINANCIAL IMPLICATIONS**

Through the 2010 Capital budget process, funding in the amount of \$2.5 million in Capital Project 08-1585 was approved for all programs affiliated with the Water Efficiency Program. These funds will be used for the implementation of water efficiency programs, such as toilet replacement program, humidifier rebate program, water efficiency retrofit projects, indoor and outdoor water audits, and pre-rinse spray valves.

Peel experienced increased 2009 water efficiency program participation levels including a drastic increase in toilet rebate applications. It is believed that this increase is due to heightened community environmental awareness combined with increased consumer product confidence and the provincial Home Renovation Tax Credit program. First quarter results for 2010 indicate that the quantity of toilet rebates received remains higher than expected, resulting in funding pressure for the project. This situation will be monitored closely and reported to council as appropriate.

The total program cost of implementing the Water Efficiency Plan from 2005 to 2015 is estimated to be \$28.5 million. The cost of the plan is expected to be less than one-third the cost of expanding Peel's water and wastewater infrastructure to supply the equivalent amount of water.

## CONCLUSION

The Region's Water Efficiency Plan was developed and implemented to reduce the necessary cost of water and wastewater infrastructure expansion, while providing sufficient capacity to accommodate further growth projects to the year 2015. To date, the implemented water efficiency measures have contributed to significant water savings and as other measures are implemented further water savings will be realized by the Region.

Dan Labrecque

Approved for Submission:

D. Szwarc, Chief Administrative Officer

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# **APPENDIX I**

## **Implemented Water Efficiency Measures for 2009**

### 1. Residential Toilet Replacement Program

Water used for flushing toilets accounts for approximately 30 per cent of residential indoor water demands. By replacing inefficient toilets (13 or 16 litres of water per flush) with more efficient models (6 litres or less), water used for flushing can be reduced by more than half.

In 2009, the Residential Toilet Replacement Program incented residents to make water efficient toilets their fixture of choice by offering rebates of \$60 to \$100 on *Peel-Approved* toilet models. These rebates helped make water efficient toilets more economically appealing than their inefficient counterparts.

In 2009 the Region issued 27,687 rebates for water efficient toilets to residents and property owners of single-family and multi-family properties. This represented a 32 per cent increase in rebates issued over 2008 totals and translated into an average annual day savings of 2.88 million litres of water. Of the toilets rebated, 17,879 or 65 per cent were high efficiency toilets (HETs) that use less than 4.8 litres of water per flush. This was up from 8,837 HETs rebated in 2008. The increase in HET purchases may be a result of the decreasing price of high efficiency toilets, the growing selection of HET models available, and increasing consumer confidence.

In order to encourage the market and consumer choice towards more efficient toilet models, more stringent standards were adopted for the 2009 *Peel-Approved* toilet list. As of April 1, 2009 all toilets on the *Peel-Approved* list were required to meet the Uniform North American Requirements (UNAR). UNAR incorporates elements of Maximum performance (MaP) testing in addition to restricting maximum flush volumes, requiring chemical-resistant trim components and successful clearance of 350g of test media. The switch to UNAR standards was as a transition towards adopting the U.S. Environmental Protection Agency's WaterSense<sup>™</sup> standards by mid 2010. Adoption of WaterSense<sup>™</sup> standards for Peel's Toilet Replacement Program will further restrict the maximum effective flush volume to 4.8 litres.

# 2. Landscape Consultations

The Landscape Consultation Program addresses increasing residential outdoor water demand. During the summer months, per capita water demands increase by approximately 20 per cent, primarily due to outdoor water use for lawn and garden watering.

To raise awareness about effective outdoor water use, and to reduce peak day and peak summer water demands, the Region offers free Lawn and Garden Consultations to residents. In an effort to enhance the Lawn and Garden Program, the consultation process has been enhanced by incorporating leading edge market research that considers residents' attitudes towards their landscape and outdoor water use. Based on market research, new elements were incorporated into the consultation process focusing on a specific landscape design for the owner's property. The fusion of traditional design ideas and eco-gardening innovations resonates with residents when beautifying their properties by incorporating their unique and personal visions of their landscape while achieving many environmental benefits including saving water and reducing storm water runoff.

# PW-B1-9

# APPENDIX I - 2 -June 1, 2010 WATER EFFICIENCY PLAN: ANNUAL UPDATE ON 2009 IMPLEMENTED WATER EFFICIENCY MEASURES CAPITAL PROJECT 08-1585

In 2009, three teams of two trained co-op students visited homeowners to assess their lawns and gardens and provide a conceptual landscape sketch of their front and/or backyards. These consultations focused on identifying how residents could create an outdoor space that they considered functional and beautiful while meeting the needs of the region to reduce summer outdoor water use.

The 2009 summer campaign was extremely successful with a total of 1200 consultations completed by the teams. Based on the WEP's projected water savings and recorded savings from Greater Toronto Area municipalities, a typical household would save no less than 100 litres of water on peak demand days. By applying these reported results, an estimated 1,200,000 litres of water have been saved on peak demand days, and 12,500 litres of water per average annual day as a result of the 2009 Lawn and Garden Consultation program.

# 3. Clarkson Sustainable Neighbourhood Study

To monitor the effect of fusion landscaping and sustainable residential landscape design on outdoor water use, a long term study is being conducted in the Clarkson neighbourhood of Mississauga. The study area is bounded by Orr Road to the South, South Sheridan Way to the North, Clarkson Road to the East and Southdown Road to the West. The study will include a maximum of five fusion demonstration gardens constructed in the front yards of single family homes in the Clarkson study area. Five residential homes were selected for the study through a thorough application and billing assessment process.

Water consumption data was collected in 2009 to establish a baseline water demand for the neighbourhood. Water data will continue to be collected for five years to monitor the effects of the fusion landscaping on the community. The intent of the fusion landscapes is not only to reduce the outdoor water demand of the homeowners with the demonstration gardens, and also to inspire their neighbours and community to create beautiful fusion landscapes. The fusion landscapes are to be constructed in the spring of 2010.

# 4. Toilet Replacement Program for Businesses

The Toilet Replacement Program for Businesses offers rebates of \$60 to \$140 to Industrial, Commercial and Institutional (ICI) property owners who replace inefficient toilets with efficient *Peel-Approved* models. The higher, \$140 rebate is provided for the replacement of flush valve toilets, and was selected to help offset the higher cost of replacement and account for their high usage in commercial applications.

In 2009, the *Peel-Approved* list of toilets was changed to include only models that have passed the Uniform North American Requirements (UNAR). These changes were consistent with those made to the Residential Toilet Replacement Program, and were meant as an interim measure to adopting WaterSense<sup>™</sup> standards in 2010.

In 2009 the Region issued a total of 243 rebates to business owners, 126 of which were for high efficiency toilets. It is estimated that 56,070 litres of water per day was saved as a result of the toilet replacement program for businesses in 2009.

### 5. Spray Valve Replacement Program

Many food service facilities use a pre-rinse spray valve to rinse dishes prior to putting them into automated dishwashers. Installing a low flow pre-rinse spray valve can reduce a facility's water and energy consumption and lower operating costs.

In 2009 a total of 496 water efficient spray valves were installed in food service facilities in Peel. Approximately half of the facilities visited did not have a spray valve apparatus for dishwashing and simply used faucets to rinse the dishes. To help these facilities save water, 1075 faucet aerators were installed on faucets used for rinsing. The installation of spray valves and aerators in 2009 is estimated to have saved a total 613,630 litres of water per day.

### 6. Industrial, Commercial and Institutional Indoor Water Audit

Industrial, Commercial and Institutional (ICI) water demands account for approximately 30 per cent of the total water demand within the Region, translating to 130 to 150 million litres of water per day. The ICI Indoor Water Audit program is aimed at identifying potential water savings within ICI facilities that may be achieved through permanent process change.

In 2009 a total of 39 indoor water audits were conducted at facilities across Peel. Seven facilities completed the audit program in 2009 by making permanent process changes and were eligible for a rebate. Changes made to the facilities resulted in a permanent water savings of 713,670 litres of water per day.

# 7. Industrial, Commercial and Institutional Landscape Irrigation Audit – Pilot Project

A pilot project to identify potential outdoor water savings contributing to peak day demand reduction that can be achieved through irrigation system modification for the Industrial, Commercial and Institutional sector began in the spring of 2009. The study examines ICI summer water users and explores how summer water demands can be reduced through optimizing current timer based irrigation systems, upgrading to smart controllers, or combining smart controllers with optimized systems.

Eight facilities were selected for the first stage of the pilot project. This first stage included determining the watering requirements for each facility and examining whether their irrigation systems were appropriate for use in the study. Pre-monitoring of eligible facilities was undertaken in the spring and summer of 2009, followed by system optimization. Water savings achieved through system optimization will be determined using post monitoring data from 2010. Based on the results of the post monitoring data a select number of facilities will be encouraged to install smart controller systems and examine water savings above and beyond that achieved through system optimization alone.

The total maximum water savings resulting from system optimization and smart control systems at the eight facilities is 44,344,000 litres per year.

- 1 -

### WATER EFFICIENCY PLAN: ANNUAL UPDATE ON 2009 IMPLEMENTED WATER EFFICIENCY MEASURES CAPITAL PROJECT 08-1585

### APPENDIX II

### 2010 Program Highlights

Water savings resulting from the Water Efficiency Plan remain strong, with an average annual day demand savings of 1.34 ML in the first quarter of the year.

To keep water efficiency initiatives current and relevant to Peel's population, the measures are constantly being modified to take into consideration emerging technologies and industry trends. A detailed summary of 2010 initiatives is included in Appendix II.

## 1. Residential Toilet Replacement Program and Toilet Replacement Program for Businesses

Effective April 1, 2010 the Region of Peel adopted WaterSense<sup>™</sup> standards for its Residential Toilet Replacement Program qualification system. WaterSense<sup>™</sup> is a widely popular qualification system that has gained international recognition and is widely accepted for use throughout the United States and more recently Canada.

The switch to WaterSense<sup>™</sup> will help ensure that only the most water efficiency technology available is encouraged (effective flush volume of 4.8 litres per flush or less), and that water savings achieved through installing an efficient toilet are sustained throughout the life of the fixture.

To coincide with the switch to WaterSense<sup>™</sup>, and the removal of 6 litre per flush toilets from the *Peel-Approved* list, the Region will no longer offer rebates of \$100 on certain *Peel-Approved* toilet models. As of April 1, 2010 the rebate for all high efficiency toilets is \$60.

Similar changes have been made to the Toilet Replacement Program for Businesses. All gravity flush toilets on the *Peel-Approved* list for businesses must also meet WaterSense<sup>™</sup> standards. The Uniform North American Requirements (UNAR) will remain the qualification system for flush valve toilets that are commonly used in commercial settings.

### 2. Humidifier Rebate Program

Adding to the suite of initiatives implemented under the Water Efficiency Plan, the Region commenced a Humidifier Rebate Program on March 1, 2010. The program aims to educate the public about water efficiency and to encourage homeowners to make water efficient choices when purchasing furnace-mounted humidifiers.

Many furnace-mounted humidifiers send large quantities of water to the drain. This water is considered water wastage as it is not used in the humidification process. The Humidifier Rebate Program provides rebates of \$30 for humidifiers that send less than 50 litres of water to the drain per day and \$70 rebates for humidifiers that send less than 10 litres of water to the drain per day. Rebate incentives and eligible models were determined based on research and testing.

York Region and the City of Guelph have been working in partnership with the Region to commence similar Humidifier Rebate Programs. These programs were all scheduled in launch in March 2010.

PW-B1-12

June 1, 2010

## WATER EFFICIENCY PLAN: ANNUAL UPDATE ON 2009 IMPLEMENTED WATER EFFICIENCY MEASURES CAPITAL PROJECT 08-1585

### APPENDIX III

Since the Water Efficiency Plan was implemented in 2005, large strides have been made in encouraging water efficiency. Consumers are becoming increasingly aware of environmental issues and are more frequently considering the impact of their purchasing decisions on the environment. This has resulted in manufacturers creating products with more consideration for the environment.

# 1. Trends in Toilet Flush Volume

Over the past five years, large gains have been made in the promotion of and requirement for water efficient toilet fixtures. Toilet Replacement programs that incent residents to make water efficient toilets their fixture of choice, have persuaded manufacturers to design more water efficient technologies and has reduced the number of inefficient toilet models for sale.

Recent progress in reducing the maximum allowable flush volume of toilet fixtures includes:

 <u>Green Plumbing and Mechanical Code Supplement</u> (2010) International Association of Plumbing and Mechanical Officials (IAPMO)

Recommends that toilets have an effective flush volume of less than 1.6 gallons per flush (6 litres) and that all gravity, pressure assist and electrohydraulic tank type toilets must meet Water-Sense™ standards.

CSA Standard for plumbing fixtures (CSA B45) (2009) Canadian Institute of Plumbing and Heating (CIPH)

CIPH has taken steps to remove 13 litre per flush toilets from the CSA Standard for plumbing fixtures. Manufacturers will no longer be able to have their 13 litre per flush product approved for sale in Canada, effectively eliminating 13 litre toilets from the market.

Interim Ontario Building Code Changes (O Reg 503/09) (2009), Ontario Ministry of Municipal Affairs and Housing, affecting section 7.6.4.2 Plumbing Fixtures. These changes would mandate a maximum allowable flush volume of six litres for all toilets and reduce exemptions for public facilities and historic buildings. Changes regarding maximum allowable flush volume are scheduled to take effect January 1 2011.

Ontario Water Opportunities Act In March, 2010, the Ontario government announced plans to introduce a Water Opportunities Act. The Act would build on Ontario's expertise in cleanwater technology, lay the foundation for new Ontario jobs, and make the province a leader in water conservation and treatment.

### - 2 -

# WATER EFFICIENCY PLAN: ANNUAL UPDATE ON 2009 IMPLEMENTED WATER EFFICIENCY MEASURES CAPITAL PROJECT 08-1585

Although the progress made in toilet efficiency is encouraging, further improvements can still be made. With 6L toilets becoming the standard, further water efficiency can

be promoted by encouraging the purchase of WaterSense labeled toilets which further restricts effective flush volume to no greater than 4.8 litres per flush. WaterSense is a widely recognized certification system in the US and in Canada. Along with the Region of Peel, the City of Guelph, Halton Region and Region of York are also switching their toilet replacement program certification standards to WaterSense.

### 2. Retailer Trends in Water Efficient Fixtures

Growing consumer demand for water efficient and environmentally friendly products has also caused retailers to carry a wider array of environmentally friendly products to meet consumer demand and to promote their environmental stewardship.

Big box home stores such as Lowes, Home Depot, and Rona are examples are retailers that have increased their environmental commitment. These retailers have each created their own environmental initiatives that help educate consumers about the environmental impacts of their product purchases. Lowes does not sell 13 litre toilets, Home Depot has created its EcoOptions Program to help consumers identify the most environmentally friendly products, and Rona has created its own brand of Eco Responsible Products as well as advertised the importance of proper paint disposal.

These programs complement Water Smart Peel messaging by helping to educate consumers about the importance of the environment and understand that even the simplest modifications in purchasing behavior can help the environment.

### 3. By-laws for Conservation

Proposed changes to By-law 19-77, the Sanitary Sewer Charge Appeal program, are expected to promote industrial commercial and institutional (ICI) water efficiency initiatives and general water conservation practices to Peel businesses. Under By-law 19-77, companies are able to apply for a credit on the sanitary charge portion of their water bill if they divert at least 20 percent of their purchased water away from the sanitary sewer. Proposed changes to the by-law will no longer allow companies to claim the once through cooling water that goes to the storm as part of their diversion. This change will effectively charge companies for disposing of non-contact cooling water and promote the adoption of more water efficient procedures and technologies.

The proposed changes are expected to increase participation in the Region's Indoor Water Audit Program, as the program helps companies determine how to reuse and conserve water.



APPENDIX III June 1, 2010

#### - 3 -

## WATER EFFICIENCY PLAN: ANNUAL UPDATE ON 2009 IMPLEMENTED WATER EFFICIENCY MEASURES CAPITAL PROJECT 08-1585

### 4. Recognizing the Water-Energy Connection

Recognition of the link between water and energy consumption has increased. Through water efficiency initiatives such as the Toilet Replacement Program that reduce average household consumption, the Region also reduces its electricity and

gas consumption by reducing the energy used in the water and wastewater treatment processes. By reducing energy consumption we are also decreasing our green house gas (GHG) emissions and protecting our air quality. Reducing our greenhouse gas emissions and energy consumption and water consumption is key to demonstrating the Region as a good environmental steward.

Increased media coverage of events such as Earth Hour have also helped to educate the public about the troubles of climate change and green house gas emissions. This has helped citizens become more environmentally aware of how our actions ultimately impact our climate.



June 1, 2010

## WATER EFFICIENCY PLAN: ANNUAL UPDATE ON 2009 IMPLEMENTED WATER EFFICIENCY MEASURES CAPITAL PROJECT 08-1585

### **APPENDIX IV**

The Region collaborates with several agencies to deliver environmental programming and messaging including the importance of water conservation and efficiency. Table 1 below highlights some of the agencies that the Region has collaborated with.

Table 1		
Agency	Program or Event	Description
Toronto and Region Conservation Authority	Partners in Project Green	A community of businesses working together to green their bottom line by creating an internationally- recognized 'eco-business zone' around Toronto Pearson.
	County Court Sustainable Neighbourhood Action Plan	A pilot project aimed at creating local actions to prepare Neighbourhoods for climate change and to make them more environmentally friendly.
Credit Valley Conservation Area (in partnership with Evergreen)	Greening Corporate Grounds	Helps corporations green spaces outdoor spaces and develop plans to maintain the areas and encourage sustainable practices.
Garden Centres	Landscape Consultation Program	As part of the Landscape Consultation Program the Region is partnering with Garden Centres to promote eco-friendly gardening practices and fusion landscaping
Eco Caledon		Citizens for a Clean Caledon work to improve the environment and to support, study, and or implement waste diversion policies and programs in the Town of Caledon. Eco Caledon is responsible for rain barrel sales in the Town of Caledon
Brampton Clean City Committee		Brampton Clean City works together with local citizens to foster environmental awareness and responsibility by successfully promoting and coordinating opportunities for neighbourhood and community pride in Brampton.

APPENDIX IV June 1, 2010

WATER	EFFICIENC	YPLAN:	ANNUAL	UPDATE	ON 2009	IMPLEMENTED	WATER
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- 2 -

# CAPITAL PROJECT 08-1585

		through our Adopt-A-Park, 3 R's Educational Programs, Clean and Green Schools, and Park Stewardship programs.
EcoSource		EcoSource is an innovative environmental organization that empowers community to become more environmentally responsible. They specialize in fun, hands-on programs that focus on how each of us can change our daily habits to become better environmental citizens.
Ontario Water Works Association (OWWA)	Water Efficiency Committee	The OWWA Water Efficiency Committee is dedicated to advancing water use reduction by influencing government policies and promoting water-efficient technologies and practices.
Canadian Water and Wastewater Association	National Water Efficiency Committee	<ul> <li>The National Water Efficiency Committee's is interested in</li> <li>Fostering innovation in water efficiency research and technology improvement related to water using fixtures, devices, appliances and practices and processes</li> <li>Promoting programs, policy and legislation to ensure the efficient and sustainable use of water resources in the municipal water supply services.</li> <li>System operating efficiency such as System Leak Detection</li> </ul>
York Region and the City of Toronto	Canada Blooms	The Region of Peel, York Region and the City of Toronto combined resources to educate the public about eco-gardening techniques at the Canada Blooms Home Show.