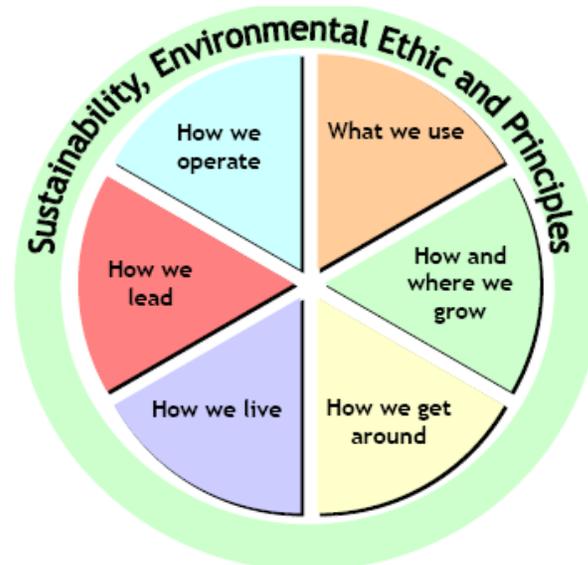


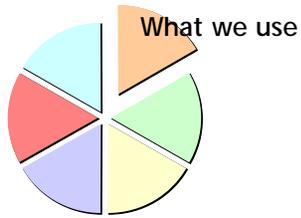
Attachment No. 1



**COMMUNITY SUSTAINABILITY AND ENVIRONMENTAL MASTER PLAN  
IMPLEMENTATION UPDATE**



**Priorities and Key Initiatives Committee  
June 2014**



## Goal 1: To significantly reduce our use of natural resources and the amount of waste we generate

The City of Vaughan, as a leader in sustainability, is committed to making prudent choices about its consumption of goods and resources. The action plans related to “what we use” in Vaughan focus on sustainable energy use to reduce our greenhouse gas emissions and improve air quality, a more conservative approach to water use in our facilities and a commitment to reducing the amount of garbage generated in our own facilities and a 100% waste diversion target as part of the Greening Vaughan strategy. In addition, the City encourages sustainable procurement and the use of local, renewable energy sources. The action plans associated with this goal were created with a recognition of global climate change, implementation of the Energy Conservation Leadership Act, and the need to monitor and reduce energy consumption.

### Objective 1.1: To reduce greenhouse gas emissions and move towards carbon neutrality for the City of Vaughan’s facilities and infrastructure

Actions	Time Frame	Project Responsibility		Status April 2014
		Owner	Resources	
1.1.1. Seek creative funding for energy saving projects in municipal facilities, including: <ul style="list-style-type: none"> <li>• Developing an energy savings policy to ensure that the funds recouped from energy savings are reinvested into energy-related initiatives; and</li> <li>• Applying to the Municipal Eco Challenge Fund (MECF).</li> </ul>	Ongoing	Strategic & Corporate Services	Community Services & Engineering and Public Works	The City of Vaughan continued to access Ontario Power Authority incentives for energy savings projects such as the Energy audit, LED retrofits, mechanical system upgrades. enhanced power management for computing units. Over the past year, the City has applied for over \$ 50 k in incentive payments to implement energy savings projects.
1.1.2. Evaluate the city’s greenhouse gas emissions by completing an energy audit on all City facilities (Partners for Climate Protection Milestone 1) by building upon the ongoing work of other municipalities (i.e., templates).	2009-2010	Community Services	Engineering and Public Works	Completed. The energy audit at 28 City of Vaughan facilities was completed Q4. 2013. The results of the audit will be a foundation for the Conservation Demand Management Plan currently under development. The City also received confirmation from the Partners for Climate Protection that milestone 1 was successfully completed in Q2, 2013.

## Objective 1.1: To reduce greenhouse gas emissions and move towards carbon neutrality for the City of Vaughan's facilities and infrastructure, continued

Actions	Time Frame	Project Responsibility		Status April 2014
		Owner	Resources	
<p>1.1.3. <i>Prepare an annual energy conservation plan pursuant to the Energy Conservation Leadership Act, 2006, S.O. 2006, C3. Such plan shall be prepared in accordance with the requirements of the Act, including:</i></p> <ul style="list-style-type: none"> <li>• <i>An itemized description of significant energy consuming technologies and operations;</i></li> <li>• <i>Annual energy usage of each of the technologies and operations;</i></li> <li>• <i>Current and proposed activities and measures to conserve energy used by the technologies and operations and otherwise reduce the amount of energy used;</i></li> <li>• <i>A summary of the programs and achievements in energy conservation and other reductions since the previous plan; and</i></li> <li>• <i>Any such information as may be prescribed.*</i></li> </ul>	As determined by the regulations (not yet issued by the Province)	Community Services	Engineering and Public Works & Vaughan Fire and Rescue Services	The Conservation Demand Management Plan is currently under development by Building and Facilities Department in partnership with the Environmental Sustainability Office. The five year plan is expected to go to Council for approval in Q 2, 2014 in order to make the Ministry of Energy July 1, 2014 reporting deadline.
<p>1.1.4. In preparation for the provincially-mandated responsibilities associated with 1.1.3, join Partners for Climate Protection (PCP is a network of 166 Canadian municipal governments who have committed to reducing greenhouse gases and acting on climate change) as a way of showing leadership on climate protection issues.</p>	Based on the timing of the implementation of 1.1.3. and 1.1.2.	Community Services	Engineering and Public Works	Completed. City of Vaughan obtained membership following approval of Council in March 2011.

\* *Actions in italics represent municipally-mandated responsibilities or initiatives that are already underway (or planned for) at the City*

## Objective 1.1: To reduce greenhouse gas emissions and move towards carbon neutrality for the City of Vaughan's facilities and infrastructure, continued

Actions	Time Frame	Project Responsibility		Status April 2014
		Owner	Resources	
<p>1.1.5. Develop an emissions reductions plan (PCP Milestone 2) for City facilities. This reduction plan should examine:</p> <ul style="list-style-type: none"> <li>• Moving towards carbon neutrality;</li> <li>• Potential savings in new buildings and existing infrastructure (retrofits);</li> <li>• Implementing a "lights-out" initiative for municipal buildings;</li> <li>• Energy conserving streetlight pilots; and</li> <li>• Support for local, renewable sources of energy.</li> </ul>	Based on the result of the audit performed in 1.1.2.	Community Services	Engineering and Public Works	This action is being addressed in concert with Action 1.1.3. The Conservation Demand Management Plan will address many of the aspects suggested under this particular aspect.
1.1.6. Develop a comprehensive green fleet strategy	2011-2014	Community Services	Engineering and Public Works & Vaughan Fire and Rescue Services	Completed. Implementation is progressing through a series of concerted efforts targeting various aspects of the strategy.



citizens engaged in this activity. Funding information is provided via the website as well.

## Objective 1.2: To promote reduction of greenhouse gas emissions in the City of Vaughan, continued

Actions	Time Frame	Project Responsibility		Status April 2014
		Owner	Resources	
<p>1.2.2. Through partnership, consider the opportunities for developing community energy strategies for new development areas for the purpose of reducing energy use on a community or neighbourhood basis, by applying such measures as:</p> <ul style="list-style-type: none"> <li>• Energy conservation measures applied to community and building design, implemented through the planning process;</li> <li>• District energy systems;</li> <li>• Co-generation and distributed power generation; and</li> <li>• Photovoltaic, geothermal and wind systems.</li> </ul> <p>The City evaluates all major development areas for their potential for district energy systems and other appropriate alternative energy forms. As a pilot program, initiate a feasibility study to examine the opportunities for developing a district energy system in the Vaughan Corporate Centre, concurrent with the review of the Vaughan Corporate Centre Secondary Plan.</p>	2009-2010	Strategic & Corporate Services	Engineering and Public Works	The City of Vaughan Community Climate Change Action Plan completed in Q4, 2013 provided the community with practical ways to reduce greenhouse gas emissions from community sources. In Q1, 2014 the City of Vaughan received funding from the Ministry of Energy to complete a Municipal Energy Plan. The MEP will allow the City to integrate energy plans into the secondary plan process and develop longer term energy plans.

1.2.3.	Identify and work with partners to evaluate the community's greenhouse gas emissions (PCP Milestone 1)	2011-2014	Strategic & Corporate Services	Completed. The greenhouse gas corporate and community inventories were presented and approved by Council in May 2013. The Federation of Canadian Municipalities confirmed that the City of Vaughan had achieved PCP Milestone 1.
1.2.4.	Develop an emissions reductions plan (PCP Milestone 2) for, and in partnership with, the community.	2011-2014	Strategic & Corporate Services	The City of Vaughan Community Climate change Action Plan completed in Q4, 2013 with the support of 30 + community stakeholders was adopted by Council in Apr 2014.

## Objective 1.2: To promote reduction of greenhouse gas emissions in the City of Vaughan, continued

	Actions	Time Frame	Project Responsibility		Status April 2014
			Owner	Resources	
1.2.5.	<p>Complete PCP Milestones 3, 4 and 5 of the Partners for Climate Protection Framework in partnership with the community, including:</p> <ul style="list-style-type: none"> <li>• Developing a local action plan;</li> <li>• Implementing the local action plan or a set of activities; and</li> <li>• Monitoring progress and reporting results; evaluate and report annually on changes in energy use.</li> </ul>	2011-2014	Strategic & Corporate Services		As per action 1.2.4, the development of the Community Climate Change Action Plan was adopted by Council in April 2014. This satisfies milestone 3 of the Partners for Climate Protection Program. Implementation of the eight actions has been initiated as has further evaluation of the nine opportunities.

## Objective 1.3: To support enhanced standards of stormwater management at the City and work with others to care for Vaughan's watersheds

Actions	Time Frame	Project Responsibility		Status
		Owner	Resources	April 2014
1.3.1. <i>Continue pilot programs to examine various technologies and techniques to improve winter road maintenance (e.g. salt reduction).</i>	Ongoing	Engineering and Public Works		Salt usage for the 2012-2013 winter season was considerably lower than previous seasons, even with a higher number of salting events. This can be attributed to reduced application rates using the alternative de-icer, and changes in operational procedures. Full implementation of alternative de-icer (Thawrox) occurred in winter of 2013-2014. Final salt usage for the past winter season is up, primarily due to the extremely cold conditions lasting the entire season.
1.3.2. <i>Through the development of the City's new Official Plan, and in partnership with the Toronto and Region Conservation Authority, ensure protection of remaining natural features and explore opportunities for habitat restoration in headwater areas, along riparian corridors, and around wetlands.</i>	Ongoing	Planning	Engineering and Public Works & Community Services	Based on interest from public and stakeholder, Staff undertook additional work on Phases 2-4 of the study. Staff are conducting additional public consultation and in June of 2014 will forward a Public Hearing report outlining findings. The final NHN report is targeted for completion prior to Q1 2015.  The majority of Volume 1 of the VOP 2010 approved by OMB on Feb 1 2014.
1.3.3. <i>Continue to work with other partners (such as the Toronto and Region Conservation Authority) to implement policies and undertake activities that support high water quality in Vaughan's watersheds.</i>	Ongoing	Engineering and Public Works	Planning	In 2013 Storm Ponds 42, 94 and 119 were cleaned and sediment removed.  Storm Pond 40, Tall Grass Trail storm sewer outlet, Avdell and Thomson Creek watercourse are scheduled to be cleaned in 2014.

1.3.4.	<i>Review and assess the Engineering Department design criteria and strategy for storm drainage and storm water management facilities to manage the anticipated impacts of climate change, be consistent with emerging legislation, and ensure protection from significant flooding (adapted from Vaughan Vision 2020)</i>	2009-2010	Engineering and Public Works		Black Creek Renewal Class EA Study has progressed and an integrated overall concept plan has been prepared.  City-Wide Storm Drainage / SWM Master Plan has been completed Notice of Completion to be released summer 2014. Feedback to Criteria Review has been provided through completion of City-Wide Master Plan Studies. The Master Plan Study is now complete.
1.3.5.	<i>Complete a local water, wastewater and storm sewer assessment system model for the purpose of optimizing flows (adapted from Vaughan Vision 2020).</i>	2009-2010	Engineering and Public Works		1,607 residential units of allocation capacity has recently been accepted by York Region (and released to Vaughan) subject to completion of sewer remediation work by Developers. A storm sewer system assessment model has been completed for areas in Thornhill and for the Rainbow Creek sub-watershed.
1.3.6.	Update the sanitary sewer by-law	2009-2010	Engineering and Public Works	Legal and Finance	Currently, Public Works staff are re-writing the City's Sewer Use By-law and the goal is to complete a final draft by Q-3, 2014 and circulate for internal departments' review and comments.
1.3.7.	Create a stormwater by-law	2009-2010	Engineering and Public Works	Legal and Finance	A Stormwater Infrastructure Funding study will be initiated in Q2, 2014. Phase 1, allowing for the engineering analysis and funding model options analysis to be examined and reviewed with key stakeholders. Phase 2, will focus on development of a recommended funding model or framework, along with public consultation and policy and by-law development.

\* Actions in italics represent municipally-mandated responsibilities or initiatives that are already underway (or planned for) at the City

## Objective 1.4: To ensure efficient and appropriate use of potable water in City facilities

Actions	Time Frame	Project Responsibility		Status April 2014
		Owner	Resources	
1.4.1. Evaluate the City's use of potable water by completing an audit on all City facilities (this could be part of energy audit as defined in Action 1.1.2.)	2009-2010	Community Services	Engineering and Public Works	The energy audit completed in Q4, 2014 included water usage and recommendations to reduce water usage. . Not included in the audit are water play parks, baseball diamonds and soccer fields where a separate effort may be required to realize savings in those areas. The Conservation Demand Management Plan will be expanded to include water components in future years.
1.4.2. Develop a target for the City's efficient water use and develop an action plan to move towards the lower target, including: <ul style="list-style-type: none"> <li>• Education programs for employees (including lessons learned from York's Water for Tomorrow program);</li> <li>• Evaluating the feasibility of grey water treatment and delivery in municipal buildings;</li> <li>• Making better use of captured water for lawn and garden watering; and</li> <li>• Infrastructure retrofits.</li> </ul>	2010-2011	Community Services	Engineering and Public Works	The baseline data use has now been established with the completion of the Energy audit in Q4, 2013 The Conservation Demand Management Plan will be expanded to include water components in future years.
1.4.3. Evaluate and report annually on changes in water use at the City.	2009-2011	Community Services	Engineering and Public Works	As indicated in 1.4.2, the Conservation Demand Management Plan will provide a framework for reporting on water reduction actions. A web based tracking system is in the process of

being populated to assist with tracking at the 15 facilities using the most water.

## Objective 1.5: To reduce the amount of waste generated in City owned facilities and procure sustainable products for the City's use

Actions	Time Frame	Project Responsibility		Status April 2014
		Owner	Resources	
1.5.1. <i>Continue to recycle and reuse construction material using the LEED building criteria where possible. Costs would be built into future construction tenders under the direction of an overall procurement policy.</i>	Ongoing	Community Services		Green building demolition practices continue to be in place however there were limited opportunities in 2013 to implement these initiatives.
1.5.2. Calculate the amount of waste that the City of Vaughan's facilities generate annually by completing a waste audit.	2009-2010	Community Services	Engineering and Public Works	Waste audit is scheduled for completion in Q3, 2014 is targeting 10 facilities covering the various types we operate. .
1.5.3. Develop a waste management strategy for City facilities with a few smaller, but high profile initiatives such as: <ul style="list-style-type: none"> <li>Promoting the six Rs (Refuse, Reduce, Reuse, Renew, Recycle, and Recover) in facilities through an education campaign;</li> <li>Eliminating or reducing PET water bottles, plastic cutlery and Styrofoam in City facilities; and</li> <li>Introducing three stream waste diversion in all municipal buildings and facilities.</li> </ul>	Ongoing	Engineering and Public Works	Community Services & Human Resources	Through the Solid Waste Jurisdictional Review, the viability of three stream collection (organics, garbage, recycling) at other City Building and Facilities was assessed. The report is to be presented to Council Q3 of 2014, including recommendations as to where organic collection should be provided.
1.5.4. Evaluate and report annually on the amount of waste generated and track progress in achieving the waste reduction target.	2011-2014	Community Services	Engineering and Public Works	Completed. Waste diverted from Landfills at City facilities is being tracked as one of the Green Directions Vaughan indicators. .

1.5.5. Develop and implement a policy to purchase more sustainable products; including preferences for cleaning products with low VOCs (volatile organic compounds), recycled paper, reusable office supplies, office equipment, etc. Build on the work of other municipal governments (i.e., reference to Governments Incorporating Procurement Policies to Eliminate Refuse (GIPPER)) to create a "Made in Vaughan" solution.

2009-2010	Purchasing	All	The draft Green Procurement Policy has been revised to include ethical elements as per feedback from Committee. It is expected that the revised policy will go to Finance, Administration and Audit Committee in Q3, 2014
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**Objective 1.6: To continue to reduce the amount of waste generated by Vaughan citizens, businesses and institutions**

Actions	Time Frame	Project Responsibility		Status April 2014
		Owner	Resources	
<i>1.6.1. Continue to work with the Ministry of the Environment to support the enforcement of regulations to encourage waste audits, waste reduction work plans and source separation programs for Industrial, Commercial and Institutional waste generators in Vaughan.</i>	Ongoing	Engineering and Public Works		Given York Region / area municipalities do not have jurisdiction of IC and I waste generators, similar to 2013 advocacy continues to be part of the Region's draft long-term waste strategy. City staff continues to meet with the Region and fully participate in the development of this Integrated Waste Management Master Plan and related initiatives.
<i>1.6.2. Through advocacy efforts and in partnership with the Region of York, aim for a 100% residential waste diversion target; this will be accomplished in accordance with the Greening Vaughan strategy and an evaluation of the potential for high rise residential waste collection.</i>	2011-2014	Engineering and Public Works		The 2013 curbside diversion rate was 66%, which is slightly lower than in previous years, and is attributed in part to the 'light-weighting' of recycling materials. The waste generation rate however is the same as in 2013 - 1.13 tonnes of waste generated per household per year

\* Actions in italics represent municipally-mandated responsibilities or initiatives that are already underway (or planned for) at the City