



THE TORONTO AND REGION CONSERVATION AUTHORITY

INDEX TO

SUSTAINABLE COMMUNITIES BOARD #1/06

Friday, April 7, 2006

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THE TORONTO AND REGION CONSERVATION AUTHORITY

**MEETING OF THE SUSTAINABLE COMMUNITIES BOARD #1/06
April 7, 2006**

The Sustainable Communities Board Meeting #1/06, was held in the South Theatre, Black Creek Pioneer Village, on Friday, April 7, 2006. The Chair Michael Di Biase, called the meeting to order at 11:06 a.m..

PRESENT

Michael Di Biase	Chair
David Gurin	Member
Suzan Hall	Vice Chair
Colleen Jordan	Member
Dick O'Brien	Chair, Authority
Linda Pabst	Member
John Sprovieri	Member

ABSENT

Glenn De Baeremaeker	Member
Pamela Gough	Member
Norm Kelly	Member
Glenn Mason	Member
Gerri Lynn O'Connor	Member
Michael Thompson	Member

RES.#E1/06 - MINUTES

Moved by: Suzan Hall
Seconded by: Linda Pabst

THAT the Minutes of Meeting #4/05, held on December 2, 2005, be approved.

CARRIED

SECTION I - ITEMS FOR AUTHORITY ACTION

RES.#E2/06 - SUSTAINABILITY MANAGEMENT SYSTEM

2005 Achievements and 2006 Priorities. Summary of the Sustainability Management System - 2005 year end report and recommendations of priorities for 2006.

Moved by: Linda Pabst
Seconded by: Dick O'Brien

THE BOARD RECOMMENDS TO THE AUTHORITY THAT the Sustainable Management System 2006 priorities be the areas of facility energy use, fleet management and promotion of sustainable operations procedures.

BACKGROUND

At Authority Meeting #10/99, held on October 29, 1999, Resolution #A278/99 was approved as follows:

THAT the proposed corporate Environmental Policy Statement be adopted;

AND FURTHER THAT the proposed framework for implementing an Environmental Management System be approved.

Extensive staff consultation, research and planning following this resolution resulted in an initial set of environmental management targets and objectives. These were finalized in 2002. Initially, under the Environmental Management System (EMS), only environmental targets were set. The program was expanded in 2004 to include social and economic targets and renamed *Sustainability Management System* in order to better manage Toronto and Region Conservation Authority's (TRCA) organizational movement toward sustainability.

The Sustainability Management System (SMS) enables TRCA managers to continually review, consult on, monitor, report, revise and improve TRCA's environmental performance in selected areas where internal operations have significant impact on the environment. These areas are called 'significant aspects' under ISO 14000 terminology, one global standard for environmental management systems.

2005 HIGHLIGHTS

SMS enables TRCA to track indicators of operational sustainability and report to our stakeholders. SMS measures TRCA's progress toward environmental, social and economic sustainability.

2005 was a significant year in the evolution of a more sustainable TRCA. As part of the corporate reorganization, responsibility for SMS was moved to the Finance and Business Services division, to create a stronger focus for organizational sustainability. A number of groundbreaking efforts with implications for TRCA's future sustainability leadership began in 2005:

- TRCA educational facilities (field centres, Kortright and Black Creek Pioneer Village) took the first step to becoming certified *EcoSchools*.

- TRCA embarked on an aggressive corporate approach to addressing one of the biggest contributors to corporate environmental footprint – energy and water use at TRCA buildings and facilities. To address this, a corporate Energy Management Plan was launched. This plan enables staff to gather, assess and report on detailed energy usage information at facilities and to use this data to target problem areas and make energy saving retrofits and operational changes.
- Initiated development and design for a TRCA Sustainability Station to be displayed at all TRCA staff locations. This was done with the help of Smart Commute of North Toronto. At these stations, staff members will be able to find out such things as how to access transit information, print double-sided or schedule and conduct successful meetings by conference call.

Other highlights from 2005 include:

- Design for Restoration Services Centre, a Leadership for Energy and Environmental Design (LEED) certified 'green' building, was completed.
- Completed draft list of social indicators to add to the SMS.
- Implemented new policies on purchases, including:
 - using Audubon or other green certified hotels when away on TRCA business;
 - requiring outside print jobs to solicit bids from at least one EcoLogo green certified printing company;
- Began branding TRCA staff as "Champions of Sustainability" in the *Inside Tracks* employee newsletter, on a banner produced and displayed at Head Office and on pay stubs.
- 'Turn off computer' and 'turn off lights' reminder stickers were produced and posted at various facilities.
- Continued work on upgrading/decommissioning underground oil tanks.
- The Kortright Centre for Conservation moved to using 100% green energy.
- Approval of TRCA Purchasing Policy with greater focus on green/sustainable procurement.
- Continued retrofit of above ground fuel stations.
- Ran pilot test on bio-diesel for equipment.
- Composters installed at Downsview (including vermi composter).

2006 SMS Priorities

SMS efforts in 2006 will prioritize action in the following areas:

- Renewing green fleet policy and working toward greater greening of TRCA's vehicle fleet.
- Pursuing an energy management plan for data monitoring and energy retrofit of existing facilities - preparation of a request for proposal (RFP) for energy management services and initiation of contract.
- Improve communications with TRCA staff on sustainable operations (through newsletters and Sustainability Station at all work locations).
- Improve SMS data system to incorporate weather normalized data and improve staff access to ongoing performance information.

Report prepared by: Brian Dundas, extension 5262
For Information contact: Brian Dundas, extension 5262
Date: March 27, 2006

RES.#E3/06 -

CITY OF TORONTO CLEAN AND BEAUTIFUL CITY

Status on the City of Toronto's Clean and Beautiful City Program

Moved by: Suzan Hall
Seconded by: David Gurin

WHEREAS the City of Toronto has initiated a Clean and Beautiful City initiative and has just completed their 2005 annual review and accomplishments report;

WHEREAS many of the directions of the Clean and Beautiful City initiative complement Toronto and Region Conservation Authority's (TRCA) The Living City initiatives in areas of site restoration and naturalization, parks and waterfront development, and neighbourhood "backyard" stewardship programs;

THEREFORE LET IT BE RESOLVED THAT THE BOARD RECOMMENDS TO THE AUTHORITY THAT TRCA support the principles and action plans of the Clean and Beautiful City initiative through incorporating some in TRCA initiatives within the City of Toronto's boundary;

AND FURTHER THAT staff be directed to work with Toronto staff to explore options to partner on projects that support the directions of this city-wide movement and advance a healthy environment component of this strong direction for city building.

CARRIED

BACKGROUND

During the Listening to Toronto consultation sessions that the City of Toronto ran, a clear message was conveyed that residents wanted a cleaner and more attractive city. The fundamental premise was that a clean and beautiful Toronto encourages neighbourhood pride and urban vitality, enhances business and tourist investment in the city, and preserves a high quality of life for all. Residents were distressed that their city's appearance was in decline, and that the parks and streetscapes were suffering and in distress.

In March 2004, City of Toronto Council adopted Mayor David Miller's report entitled "The Clean and Beautiful City Agenda". The agenda outlined a 2 phased approach to achieve a Clean and Beautiful City, and reinforced the city's commitment to the public realm. Although the initial phase focused on a program of clean-up and streetscape furniture coordination, Council moved to the notion that the city encourage the participation of individuals, community groups and the private sector to clean and beautify parks, boulevards and other city spaces. City staff advocate that day-to-day operations and planning decisions need to be 'filtered' through a 'Beauty Lens' to determine how things get implemented in the most beautiful manner.

There are four key steps to achieve city goals:

- enhance urban design and architectural elements of all development;
- forge key partnerships and strategic alliances with public and private partners on public realm initiatives;
- work with the development industry to ensure that an appropriate level of public amenity is met; and
- beautify public parks, local parks, ravines and other civic spaces through landscaping, parks design and public art.

A five-point action plan guides the program that moves from clean-up basics to the ultimate goal of an architecturally splendid city to be proud of. The five points include: SWEEP IT, DESIGN IT, BUILD IT, GROW IT and CELEBRATE IT.

RATIONALE

Responsibility rests with many groups and organizations as well as the individual to implement the action plan. Residents, businesses, community organizations, City Council, city employees and the Mayor's Round Table on a Beautiful City all have a part to play together. The action plan includes many program opportunities and facets for participation. Key program examples are as follows:

SWEEP ITCLEANING and maintaining our city by:

- 20 Minute Makeover each spring.
- Increased litter and debris clean-up.
- Conducting annual litter audits to measure reduction goals.
- Removing graffiti and creating murals.
- Upkeep of public buildings, structures, streetscapes and spaces.
- Increased grass cutting and weeding.
- More rigorous bylaw enforcement.
- Encouraging the public to reduce, reuse, recycle at home, work and in public places.

DESIGN IT DESIGNING the best for our city by:

- Promoting high quality architecture and urban design through new design guidelines, review processes and workshops.
- Reviewing Nathan Phillips Square.
- Promoting design competitions for public buildings and spaces.
- Beautifying prominent gateway locations in the city.
- Avenue studies to encourage design excellence in growth areas.
- Preserving buildings and neighbourhoods of architectural and heritage significance.
- Developing environmental sustainability standards.
- Setting streetscape and engineering standards.
- Implementing a system of high quality, unified street furniture.

GROW ITGREENING our city by:

- Enhancing and preserving 1,463 parks, 8,000 hectares of green space and 3 million trees.
- Planting new flower beds.
- Developing innovative horticultural displays in highly visible sites.
- Promoting the health and growth of Toronto's tree canopy and urban forest.
- Caring for existing parks.
- Restoring city ravines to their natural beauty.

BUILD IT BUILDING our city to last by:

- Promoting high quality construction in all civic buildings.
- Neighbourhood Beautification projects to renew and maintain neglected spaces.
- Beautifying streetscapes with Civic Improvement Projects and in Business Improvement Areas.
- Restoring existing heritage buildings and other structures.

CELEBRATE IT CELEBRATING and promoting our city's accomplishments at:

- Doors Open Toronto.
- Architecture and Urban Design Awards.
- Festival of Architecture and Design (FAD).
- Public art installations in both public and private development projects.
- Clean and Beautiful City Appreciation Awards.
- Live with Culture Celebration.
- Trees Across Toronto.
- City festivals and celebrations.

When the Clean and Beautiful City Five-Point Action Plan was approved by City Council at the November/December meetings in 2004, \$8.6 million in new capital funds and \$13.8 million in new operating funds over the period of 2005-2007 was also approved for implementation purposes (Attachment 1). This funding supports 48 projects across the city divisions.

The Clean and Beautiful City Initiative has been underway for just over one year, and an impressive 2005 Annual Review of Accomplishments has just been issued. A wide variety of projects and programs were included and a new public awareness has been achieved. Private funds have been leveraged, in-kind donations and many hours of volunteer effort have all contributed to the success of the initiatives for 2005. The report also highlights the efforts of individuals, groups and companies who have been recognized in an Appreciation Award program.

DETAILS OF WORK TO BE DONE

The city should be congratulated for its excellent efforts in establishing this thoughtful initiative towards improving the public realm of our city, and encouraging the partnerships that reinforce its success. Many projects and partnership initiatives that TRCA has been historically committed to or those that we are currently developing fit well within the city's Clean and Beautiful program directions. A few may include stream/ravine restoration projects, habitat creation and healthy backyards programs, TRCA clean-up coinciding with the Mayor's 20 Minute Makeover. Staff will explore those opportunities which best fit within the programs and will continue our dialogue about operation and capital partnerships with city staff where environmental and open space benefits can be identified to meet the immediate goals of the Clean and Beautiful Initiative and TRCA's The Living City Strategic Plan.

Report prepared by: Carolyn Woodland, extension 5214
For Information contact: Carolyn Woodland, extension 5214
Date: March 22, 2006
Attachments: 1



CITY CLERK

Consolidated Clause in Policy and Finance Committee Report 9, which was considered by City Council on November 30, December 1 and 2, 2004.

Clean and Beautiful City - Five-Point City Action Plan to Make Toronto a Clean and Beautiful City - All Wards

City Council on November 30, December 1 and 2, 2004, amended this Clause:

- (1) *to provide that:*
 - (a) *all parks receive an extra grass cutting in 2005, subject to the normal budget approval process;*
 - (b) *all boulevards receive one extra cut in 2005, subject to the normal budget approval process; and*
 - (c) *the funds that are allocated for 2005 and beyond for the Action Plan for a Beautiful City, be equally distributed across all 44 Wards in the City of Toronto; and*
- (2) *by adding the following:*

“That:

 - (a) *the Postering By-law be considered by the Planning and Transportation Committee at its first meeting in January 2005;*
 - (b) *the Budget Advisory Committee be requested to consider giving the Toronto Police Service additional funding to deal with graffiti enforcement;*
 - (c) *the Acting Commissioner of Works and Emergency Services look at ways to hire extra students, at student rates, for litter picking, and report to the Works Committee in January 2005; and*
 - (d) *the Acting Commissioner of Works and Emergency Services be requested to report to the Works Committee in two months on operational changes to ensure streets are clean.”*

This Clause, as amended, was adopted by City Council.

Council also considered additional material which is noted at the end of this Clause.

The Policy and Finance Committee recommends that:

- (I) City Council adopt the staff recommendations in the Recommendations Section of the report (November 22, 2004) from the Commissioner of Urban Development Services, the Commissioner of Economic Development, Culture and Tourism and the Acting Commissioner of Works and Emergency Services; and**
- (II) the Commissioner of Economic Development, Culture and Tourism be requested to explore ways of ensuring that Hydro One is included in the Tree By-law and that the amendments address:**
 - (1) how the clear-cutting policy in hydro right-of-ways will be:**
 - (a) reviewed with Urban Forestry and the Tree Advocate;**
 - (b) reviewed with the local community; and**
 - (2) the tools that will be available for enforcement;**

and submit a report to the Economic Development and Parks Committee in the first half of 2005;

Action taken by the Committee

The Policy and Finance Committee referred the following motion to the Commissioner of Urban Development Services, the Commissioner of Economic Development, Culture and Tourism and the Acting Commissioner of Works and Emergency Services for consideration:

Moved by Councillor Cowbourne:

“That Gateways to the City be identified for beautification, including Port Union and Kingston Road, and they be referred to staff and to the Roundtable for a Beautiful City for consideration.”

The Policy and Finance Committee submits the following report (November 22, 2004) from the Commissioner of Urban Development Services, the Commissioner of Economic Development, Culture and Tourism, and the Acting Commissioner of Works and Emergency Services:

Purpose:

To outline a five-point City action plan to make Toronto a clean and beautiful city and to provide a status report on initiatives undertaken to date.

Financial Implications and Impact Statement

The Clean and Beautiful City initiatives described in this report will require an operating budget of \$4.326 million in 2005, with an incremental operating budget impact of \$5.656 million in 2006 and \$3.825 million in 2007. These funds are part of the recommended 2005 Operating Budget requests of the affected departments, which include Urban Development Services (UDS), Works and Emergency Services (WES) and Economic Development Culture and Tourism (EDCT) and are summarized and detailed in Appendix 1.

In addition, the recommended 2005 Capital Budget submissions of departments include \$4.688 million for Clean and Beautiful City initiatives with \$915 thousand to be funded from development charges and \$3.773 million to be funded from debt. The future year capital budget requests are \$2.310 million in 2006, with \$530 thousand to be funded from development charges and \$1.780 million to be funded from debt, and \$1.618 million in 2007, with \$530 thousand to be funded from development charges and \$1.088 million to be funded from debt. The future year operating impacts of the 2005 Capital Budget may not be fully outlined in this report and will be reporting on prior to the finalization of the 2005 budget.

The Chief Financial Officer and Treasurer has reviewed this report and concurs with the financial impact statement.

Recommendations:

It is recommended that:

- (1) the service enhancements to support the Clean and Beautiful City initiative as described in Attachment 1, be approved in principle subject to final approval in the 2005 Operating and Capital Budgets;
- (2) this report be forwarded to the Roundtable on the Clean and Beautiful City;
- (3) this report be forwarded to the appropriate Standing Committees, including Budget Advisory Committee for consideration with the 2005 budget; and
- (4) that the Commissioners of UDS, WES and EDCT report back to the Budget Advisory Committee in January 2005, on the operating impact of the 2005 Capital Budget.

1.0 Background:

The City of Toronto has embarked on an ambitious program to make Toronto a clean and beautiful city as one of nine Council priorities for the 2003 to 2006 term. At its meeting of March 1 to 3, 2004, City Council unanimously approved a two-stage approach to achieving this priority, as outlined in Mayor David Miller's report "The Clean and Beautiful City Agenda."

Stage 1 of the program focused on cleaning up the city and was the subject of a number of reports, including an April 30, 2004, report from the Commissioner of Works and Emergency Services and the Chief Administrative Officer that set out an implementation and operational plan for both clean and beautiful city actions over the next two years. In 2004, Council allocated a \$2.6 million Operating Budget solely for clean city initiatives.

Stage 2 of the program, led by the Commissioner of Urban Development Services, continues the clean city initiatives and introduces actions to beautify Toronto with the participation and assistance of the public and private sector.

Implementation of the 10 steps to a coordinated and sustainable program of cleanliness began in early 2004. The main steps included a 20-minute Toronto makeover, community and ward cleanup, litter and recycling collection improvements, street sweeping and flushing improvements, graffiti removal and prevention enhancements, bylaw enforcement improvements and actions to reduce illegal dumping. Postering, consolidation of litter, waste, long grass and weeds bylaws, a review of the harmonized placement of newspaper vending boxes and city-wide graffiti abatement activities were later added.

Stage 2 set out the following four steps to achieve beautiful city goals:

- (i) enhancing urban design and architectural elements of all development;
- (ii) forging key partnerships and strategic alliances with public and private partners on public realm initiatives.
- (iii) working closely with the development industry to ensure the City's urban design standards are met and provide a high level of public amenity; and
- (iv) beautifying public parks, local parks, ravines and other civic open spaces through landscaping, parks design and public art.

Roundtable on the Beautiful City:

In 2004, City Council approved the establishment of a number of citizen advisory roundtables to champion Council's priorities. Members of the Roundtable on the Beautiful City are highly respected individuals with expertise in fields related to a variety of City-building initiatives. They will advise the Mayor and Council, through the City's standing committees, on strategies and actions to implement a variety of Beautiful City related actions, on ways to form partnerships, to find and leverage resources and to build public awareness. The first meeting of this Roundtable will take place on November 29, 2004.

2.0 Comments: Shift in Thinking:

During Listening to Toronto sessions, residents expressed their desire for a cleaner and more attractive city. This view underscores Toronto's own Official Plan policies for creating a city that is both functional and beautiful. A clean and beautiful Toronto encourages neighbourhood pride and urban vitality, enhances business and tourist investment in Toronto and preserves a high quality of life for all. This report proposes a five-point action plan to clean and beautify Toronto that encourages individuals, community groups and the private sector as well as all city departments to take responsibility for achieving Council's priority.

While articulating a clear action plan for City programs is a good first step to achieving a more Clean and Beautiful City, a paradigm shift in thinking will be key to fully realizing Toronto's potential. City Council, City departments and the public will all need to look at how their day-to-day decisions and activities affect Toronto's image. This will mean filtering normal operations and planning decisions through a "Beauty Lens," to identify how to do things differently within the same program and budget and achieve a better outcome. The City's partners such as its agencies, boards and commissions (ABCs), school boards, and senior levels of government must also embrace this approach.

Five-Point Action Plan:

A five-point action plan, depicted on Attachment 1, organizes an evolving list of Clean and Beautiful City initiatives into five key actions: Sweep It, Design It, Grow It, Build It, Celebrate It. The plan includes approximately 48 initiatives, 13 of which are new proposals, and highlights a number of programs which already contribute to the Beautiful City agenda.

The action plan represents an ongoing cycle of activities in which the City and its residents are engaged at any given moment. For example, while great buildings and streetscapes need to be built, they must also be maintained, and trees must be planted to thrive, not just survive. Slippage in any of the links in the cycle will undermine the whole.

Sweep It – These actions are primarily directed at achieving a Clean City. Programs include roadway and roadside cleaning, litter removal, graffiti management and sustainable maintenance.

Design It - These activities are about getting projects ready for delivery. It includes designing and fundraising for projects and implementing them.

Grow It – These activities are about restoring and enhancing the system of parks, gardens, ravines and trees that make Toronto green and healthy and act as an effective barometer of urban health and well-being.

Build It - This refers to the actual bricks and mortar construction phase of projects.

Celebrate It - Celebration recognizes the collective achievements of the Toronto Public Service, the community and the private sector in beautifying Toronto. This includes events such as the Architecture and Urban Design Awards, Doors Open Toronto, ribbon-cutting to celebrate new public art, lectures and symposia.

What Has Been Implemented:

The following activities are a sampling of the numerous City programs and activities underway to help make Toronto a Clean and Beautiful City. Concerted effort and coordination has shown that visible success is achievable. Many of the programs implemented in the Clean City stage of the program will continue in 2005 and in subsequent years. They are included in the 2005 to 2007 plan set out in Attachment 1.

A number of initiatives that will result in beautification enhancements, such as those on St. Clair Avenue West and the waterfront for example, are not discussed in this action plan. In addition, day-to-day operations of City Parks, City Planning, the Culture Division, Facilities and Real Estate and Works and Emergency Services support Clean and Beautiful City objectives. These and the considerable efforts of the private sector – including developers, community groups and private individuals – to clean, enhance and beautify the City are likewise not mentioned in this plan.

The 20-Minute Toronto Makeover – More than 44,000 people participated in the April 2004, initiative, supported by seven private companies.

39-Clean – A primary point of public contact was created in Access Toronto for general inquiries about the Clean and Beautiful City: 39-Clean (392-5326).

Enhanced Litter Collection and Roadside Cleaning – The July 2004 litter audit revealed 16 percent reduction in litter on city streets over a two-year period, significantly advancing Council's goal of a 50 percent litter reduction over five years. Ongoing activities led by WES and Parks to improve access to litter/recycling bins in public spaces include:

- (i) six-month trial of EUCAN litter/recycling bins;
- (ii) placement of more than 500 new litter/recycling bins and 100 deep-waste across the city in;

Phase 1 of a three-year plan to site more than 1,500 bins and 300 deep-waste containers in Parks;

- (iii) October 2004 Council adoption of a Publication Box Strategy as the first stage of the unified street furniture program;
- (iv) improved frequency and efficiency of litter collection and street cleaning; and

- (v) the creation of a Clean Streets Reference Group.

Private Tree Bylaw – In September 2004, Council adopted a bylaw to help maintain and extend Toronto’s tree canopy through the regulation of tree removal on private property.

Harmonized Enforcement – A new initiative was formally launched on December 1, 2004, integrating litter, dumping, waste, graffiti, postering, a-frame and mobile sign enforcement. MLS (UDS) and Solid Waste, Transportation (WES) and Parks Enforcement officers are involved. The integrated enforcement team will deal with jurisdictional matters on public, private and park properties. Follow-up clean up requests, outcomes, and legal proceedings will be tracked.

Focus is on ten Priority Locations with the most chronic and persistent problem areas in the City, such as Rouge Valley and the Dundas Street West and Spadina Avenue area.

Bylaw Harmonizations – Urban Development Services has led a process to consolidate and harmonize former municipal bylaws administered by UDS, WES and EDCT that relate to Littering and Dumping of Refuse and Long Grass and Weeds. Additional bylaws to require businesses and property owners to clean in front of their properties and on adjacent public lands are being explored.

Council’s recent approval of a city-wide harmonized Parks Bylaw and revised fine structure will come into effect in 2005.

3.0 Spring/Summer 2005 Activities:

To have a discernible and timely impact on the beauty of Toronto, a number of initiatives drawn from all five actions have been scheduled for the spring and summer of 2005.

- (i) the 20-Minute Makeover (Sweep It) is planned for April 22, 2005. This program demonstrates that everyone working together can create change, good will and civic pride in a short time;
- (ii) Design Competition for Nathan Phillips Square (Design It) – City Council is sponsoring a design competition to update and improve Nathan Phillips Square to coincide with its 40th anniversary. The competition which is planned for 2005, will send an important signal to the public and the design community about the City’s commitment to beautifying its outdoor civic spaces;
- (iii) Request for Proposals (RFP) for a coordinated street furniture program (Design It) – An RFP for a consolidated street furniture program will be prepared in 2005 and issued in 2006. The intent is to achieve a coordinated street furniture and advertising program, such as those in Paris, Chicago and Vancouver, in which all elements placed within the public realm are designed with beauty, safety and efficiency of use and movement in mind;

- (iv) Gateways: City-wide Civic Beautification Projects (Design It) – Four significant public beautification projects will be designed in the city at prominent gateway locations. Projects will be designed in 2005 and built in 2006. There will be considerable public focus around each of these places;
- (v) Orphan Spaces (Build It) – Adoption and renewal of neglected public spaces across all wards of the city, targeted for “beautification” in early summer 2005. Selected sites will first be cleaned up, then spruced up through local community and business efforts, and maintained through a long-term maintenance program;
- (vi) Parks Renaissance Project (Grow It) - The first step in an integrated plan approved by Council to restore and enhance Toronto’s parks to the level the public expects;
- (vii) the first priority is increased grass cutting, combined with improved litter collection and recycling in parks. A Parks litter audit will be undertaken in January 2005;
- (viii) enhanced horticulture and floral displays across the city that use creative and unique plant materials and bed design will have an immediate impact on the look of the city in spring/summer 2005;
- (ix) Urban Tree Project (Grow It) – Develop and implement new City standards for street tree-planting to ensure that every tree in the public right-of-way has a chance to thrive; and
- (x) enhanced Architecture and Urban Design Awards planned for May 2005, (Celebrate It) – The action plan proposes funding to reinvigorate the awards program and to increase both the number and the quality of design submissions. The program will involve a gala event that will attract a large audience as well as media attention. The City has engaged a number of partners to help with this effort, including the Toronto Society of Architects, the Toronto Board of Trade, the Ontario Association of Architects, the Ontario Association of Landscape Architects and the Royal Architectural Institute of Canada.

This biennial awards program has been shifted to May, so it can be supported by other activities that month such as the potential declaration of the Festival of Architecture and Design in the City, and the successful Doors Open Toronto program.

4.0 Clean and Beautiful City Initiatives – Fall 2005 to 2007:

The following other Clean and Beautiful City initiatives from all five key actions will take place from 2005 to 2007. These initiatives represent new as well as ongoing programs and are in addition to the Spring/Summer 2005 activities mentioned above.

4.1 Sweep It (See Attachment 1 – Section 1):

- (i) Clean City initiatives such as the harmonized enforcement approach and the 20-Minute Makeover will continue into 2007.

4.2 Design It (See Attachment 1 – Section 2):

- (i) Design Review Panels in Toronto:

UDS is proposing to set up a one-day seminar on design review panels with participants from Vancouver, Montreal, Ottawa (National Capital Commission) and Birmingham, Michigan. This information will be used to assist staff, local practitioners and the Beautiful City Roundtable on how to develop a made-in-Toronto solution, consistent with our regulatory approach and processes.

Design review panels consist of professionals (architects, landscape architects, and developers) who provide advice to the Mayor and Council on specific development projects. In cities such as Vancouver, Montreal and Ottawa, they help to raise the bar on design, and the process can provide an additional level of expertise and review to improve specific aspects of developments.

- (ii) City Building Projects: Lead by Example:

This action plan proposes that the City lead urban design in all areas of its business activities, including the management of its social infrastructure through:

- (a) high-quality design and production of City buildings;
- (b) high-quality design and construction of the public realm;
- (c) procurement policies that give greater weight to design quality; and
- (d) environmental sustainability standards for new construction.

Toronto has a good record of leading urban design. The Humber River Pedestrian-Bicycle Bridge, Robertson House, Yonge Hearts Child Care Centre, Cloud Garden, the Eatonville Public Library, New City Hall/Nathan Phillips Square and the RC Harris Filtration Plant, show the range of buildings and public infrastructure contracted for by the city, and are all fine examples. The City must continue to build to the highest urban design standards in order to encourage the public, design and development industries to produce the highest quality buildings and streetscapes. Design decisions for each new public building project – whether it is a public building (fire station, library, police station, community centre, home for the aged), streetscape, street-sign, park, bridge or underpass – should feature the best design, architecture, materials and construction methods possible.

The City's partners in the agencies, boards and commissions, must join in the Clean and Beautiful City initiative to make it successful. Agencies such as the Toronto Transit Commission (TTC), the Toronto Parking Authority and the utility companies for example, have a tremendous impact on the final "look" of the city. Engaging them in the Clean and Beautiful discussion is part of the 2005 work program.

(iii) New and Enhanced Civic Improvements Projects:

This action plan recommends a budget increase of \$1 million to increase the number and quality of civic improvement projects in Toronto and to implement the new urban tree standards that call for larger tree pits and greater soil volumes.

With its current modest budget of \$1.5 million (compared to \$6 million in the former Toronto and \$20 million in Chicago), the Civic Improvement Project is able to upgrade a few blocks of about six to eight streets each year with decorative pavers, street trees and lighting fixtures, and to leverage \$20 from private development for every dollar it spends.

(iv) Beautiful Places Private Funding Campaign:

This plan recommends securing expertise in 2005 on soliciting private-sector contributions for actions such as the Gateway Beautification projects.

The Official Plan identified the need and the opportunity to direct private funds to civic enhancement projects around the City. In the same way that a private donor acted as the seed funder for the revitalization of St. George Street in 1996, the Beautiful Places program offers the opportunity to formally seek private funds to expand and enhance City projects.

(v) Development Infrastructure Policy and Standards (DIPS):

As part of this action plan, WES is leading an interdepartmental team to prepare a range of design criteria and engineering standards for new city streets for presentation to Council in 2005. In a city as mature and diverse as Toronto, a range of street standards rather than a one-size-fits-all approach is required. DIPS is intended to ensure that the right standards are achieved in the right places and that human scale is not sacrificed.

(vi) Avenue Studies:

A minimum of two avenue studies will be included in 2005, including Dundas Avenue West from Royal York to the Humber Valley, and Danforth Avenue from Victoria Park to Warden. The Avenues Program (which is part of the City's Official Plan) is the City's vision for intensifying development along existing arterials with the transit and public infrastructure to accommodate growth.

(vii) Urban Design Tools:

This action plan recommends a more aggressive use in 2006 and 2007 of the "tools" that planners and urban designers use to engage the public and achieve the best and most appropriate design. These include design workshops and charrettes, design guidelines, policy studies and design competitions, as well as statutory design review..

Design Workshops and Charrettes:

A number of charrettes are planned for 2005. Design workshops and charrettes ensure that all stakeholders, including community residents, business owners, and city staff from all relevant departments, jointly develop the best project design. Recent successful examples include the Toronto Waterfront Design Initiative, the Shuter Street Area Design Initiative, the Fort York Neighbourhood, the Sheridan Nursery site on Evans Ave in the West District, Highland Creek in the East District, and the Avenues Study Charrettes for portions of Wilson Avenue, Lakeshore Boulevard and College Street.

Urban Design Guidelines:

This plan proposes updating existing design guidelines and creating new area-wide and specific guidelines for such conditions as gas bars, drive-throughs, parking lots and big box retail. Design guidelines provide a consistent and rational approach to dealing with development on any particular site, street or area.

Urban Design Studies: King West District:

UDS is proposing a study in 2005 to review the built form and licensing policies of the King West area east of Spadina Avenue in the context of increasing development. Complex urban design issues can often be resolved by undertaking independently led studies that deal with major, city-wide and area-specific design issues.

(viii) Green Development Guidelines:

UDS proposes a two-part study to analyze municipal cost benefits of green design to understand measurable benefits to the city, and the development of guidelines for green design to provide clear and concise information for developers and planners.

(ix) Heritage Conservation District Studies:

Twelve potential candidates for heritage conservation districts are under consideration. The required background studies are paid for entirely by the communities under study.

A city's cultural and heritage infrastructure are key to the quality of life of residents and to neighbourhood identity. The work of Heritage Preservation Services under the Ontario Heritage Act has included the designation of eight Heritage Conservation Districts which ensures that changes to existing buildings and new construction maintain or enhance the design intent and existing character of the area.

(x) District Planning Models: Repair and Ongoing Maintenance:

In 2005, model builders will repair, paint and update the physical planning models located in the four district City Halls/Civic Centres. The existing planning models are in various states of disrepair and do not reflect city development over the past decade. A significant number of the public, including tourists, view these models. Planners and other City staff use models extensively to test alternative development proposals and to explain design and development ideas to the public.

4.3 Grow It (See Attachment 1 – Section 3):

(i) Urban Forestry:

Toronto's trees are one of the urban forest's most visible and troubled resources. This plan recommends a significant change in the waiting time for forestry service, increasing tree inspections and bylaw enforcement, decreasing tree removal and replacement times, enhancing the tree-watering program and implementing and enforcing the ravine and private tree bylaws. In the two-year phasing of the program, this initiative is targeted for 2006.

(ii) Parks Renaissance Project:

This is the first step in an integrated plan approved by Council to restore and enhance Toronto's parks to the level the public expects. Phase Two of enhanced turf management includes increased grass cutting, combined with improved litter collection and recycling in parks. In 2007, additional resources will be added to rejuvenate existing planting beds and develop new public gardens, supported by improved shrub and perennial garden maintenance.

In addition, a further step in the plan to restore Toronto parks involves planting 16,000 more street trees a year, improving the management of naturalized areas, cleaning up litter and replacing invasive species with appropriate alternatives.

4.4 Build It (See Attachment I – Section 4):

(i) F.G. Gardiner Expressway Underside Restoration and Cleanup – Bay to Bathurst Streets:

This plan involves modest restoration of the underside of the elevated F.G. Gardiner Expressway through the use of additional trees and plantings, lighting and fencing and limited paving, to improve general pedestrian amenity in the vicinity of pedestrian crossings.

(ii) BIA Streetscape Improvement Program:

Continuation of this program which is cost-shared with business is an important component of the action plan. Funds are provided for improvements to the physical condition of public open spaces in order to develop a desired identity and to make shopping districts more competitive, safe and attractive. Capital improvements to public property include new and enhanced sidewalks, decorative pedestrian lighting, landscaping, tree lighting and decorations, signage, public art and street furnishings.

(iii) Employment Revitalization Program:

The Employment Revitalization Program which funds capital improvements to enhance the appearance, function and public safety of employment areas is another example of a program which forms part of this plan. Many of Toronto's Employment districts need capital investment to ensure that they are desirable, attractive and safe locations for employers to locate and invest.

(iv) Façade Improvement Program:

The Façade Improvement Program provides grants to owners of commercial buildings within targeted districts to renovate their facades. Cumulatively, the façade renovations within a district provide a new image for the street, attracting new businesses. The Façade Improvement Program is also a key investment incentive, leveraging \$7 of private investment for every \$1 of public funds.

(v) Toronto Heritage Grant Fund:

In order to put in place a long-term funding strategy, a restructuring plan for the program is being prepared that includes a funding increase, to be drawn from a separate Toronto Heritage Grant Fund reserve account.

The Toronto Heritage Grant Fund provides matching grant funding to property owners of designated heritage structures for eligible restoration initiatives. Since 1986, the program has been funded by the interest generated by a modest reserve account, which has been limited to about \$55,000 for the entire city, far below the grants available in other Canadian and American cities. It is also the only financial incentive for heritage property owners made available by the City.

(iv) Banner and Mural Program:

The Banner and Mural Program provides grants to community and business associations for wall mural or street banner projects. Since 1999, 33 Banner and Mural Projects have been completed across the city.

4.5 Celebrate It (See Attachment I – Section 5):

(i) Doors Open Toronto and May Festival of Architecture and Design:

This plan recommends that the Mayor proclaim the Festival of Architecture and Design in the City during May. This program will provide the public and design communities a range of lectures, displays and events intended to educate and celebrate architecture in the city. Doors Open provides free access to inspiring spaces throughout the city during the last weekend in May, many of which are not normally open to the public. Open forums about architecture and urban design lead up to the weekend itself. The program is currently supported by federal and provincial grants, as well as by a number of sponsorships and private donations.

(ii) Private Developer Public Art Program:

This action plan recommends expansion of Toronto's Private Developer Public Art Program across the city. During the fall of 2004, the Public Art Commission will be broadened to include members from across Toronto.

The program has been extremely successful in securing millions of dollars for art to enhance public spaces or in public areas of major developments, at no cost to the City. In 2003, the Public Art Commission and City Council approved public art plans in the order of \$3.475 million. That same year, ten projects with a value of \$6.4 million were under construction and four projects with a value of \$2.2 million were completed.

(iii) Art in Public Places:

This action plan calls for a public art contribution in the amount of one percent of the construction value of major new public buildings and structures.

Toronto's public art collection includes more than 200 works of art dating from the 1880s to the present. The collection represents an important expression of community aspirations, achievements and civic pride. The management of this collection benefits from the advice of the Art Committee for Public Places.

(iv) Celebration of Creativity – 2006:

Toronto is at the threshold of a cultural renaissance created by an unprecedented number of iconic cultural facilities, designed by internationally renowned architects, that include the Art Gallery of Ontario by Frank Gehry; the Royal Ontario Museum by Daniel Libeskind; the Ontario College of Art and Design by Will Alsop; the Four Seasons Centre for the Performing arts by Diamond and Schmitt Architects; and the Royal Conservatory of Music and the Gardiner Museum of Ceramic Art by KPMB. Toronto will showcase its new cultural buildings in the year 2006 which has been proclaimed a national year of celebration of creativity in Canada.

Costs related to the Celebration are a separate request and are not included in the chart.

(v) Public Paper and Lectures:

This action plan calls for the Toronto Public Service, the business community and professional organizations to pursue lecture events and opportunities to advance excellence in urban design in the public realm.

In December 2003, The Toronto Board of Trade issued a paper entitled “Building a Successful City – Fostering Excellence in Urban Design and Architecture” which outlined the importance of high quality urban design and architecture to the quality of life of the city.

The Toronto Society of Architects (TSA) has issued “Towards a Clean and Beautiful Initiative – 10 Suggestions” with clear ideas for advancing related programs. Additionally the TSA, in conjunction with the Ontario Association of Landscape Architects (OALA), and UDS have together initiated a series of public lectures on achieving Toronto’s Beautiful City agenda.

(iv) Walk of Fame:

This action plan calls for improving the current Walk of Fame installation on King Street West, between John and Simcoe Streets. The private sector will contribute half of the costs of enhancing the streetscape and urban design of this prominent neighbourhood, which attract a large number of residents and tourists each year.

Conclusion:

With enthusiasm and hard work on the part of Toronto’s residents and business communities, as well as the full engagement of all City Departments, Agencies, Boards, Commissions and their private and public sector partners, our collective desire to make Toronto more clean and beautiful can become a reality.

Staff will continue to develop initiatives to report through the appropriate Standing Committees to Council with recommendations on necessary changes to programs, policies, bylaws, procedures or funding and to pursue innovative ways to maintain and enhance the city’s appearance.

Contact:

Elyse Parker, Manager, Special Projects, Tel: (416) 338-2432; Fax (416) 392-8115
Email: eparker@toronto.ca

The Commissioner of Urban Development Services gave a presentation to the Policy and Finance Committee respecting this matter.

(A copy of Attachment 1 - Clean and Beautiful City - 3 Year Program - Enhancements, attached to the foregoing report was forwarded to all Members of Council with the November 23, 2004, agenda of the Policy and Finance Committee and a copy thereof is also on file in the office of the City Clerk, City Hall.)

City Council – November 30, December 1 and 2, 2004

Council also considered a communication (November 30, 2004) from Deputy Mayor Sandra Bussin, Chair, Roundtable on a Beautiful City, forwarding the following communication (November 30, 2004) from the Roundtable on a Beautiful City:

Subject: Clean and Beautiful City – Five-point City action Plan to Make Toronto a Clean and Beautiful City (All Wards)

The Roundtable on a Beautiful City on November 29, 2004, requested the Chair to forward the following recommendation to City Council at its meeting on November 30, 2004, for consideration together with Clause 3 of Policy and Finance Committee Report No. 9:

That City Council be advised that the Roundtable on a Beautiful City endorses the report (November 22, 2004) from the Commissioner of Urban Development Services, the Commissioner of Economic Development, Culture and Tourism and the Acting Commissioner of Works and Emergency Services, outlining a five-point City action plan to make Toronto a clean and beautiful city and to provide a status report on initiatives undertaken to date.

The Roundtable on a Beautiful City also requested the Chair to forward the following recommendations to the Planning and Transportation Committee for consideration at its meeting on January 4, 2005:

- (a) That the Commissioner of Urban Development Services be requested to report to the Roundtable on a Beautiful City on the development and adoption of sustainable design principles and standards; and*
- (b) That the proposed billboard policy/by-law be referred to the Roundtable on a Beautiful City for review and comment.*

Background:

The Roundtable on a Beautiful City on November 29, 2004, heard a presentation from the Commissioner of Urban Development Services on the City's Five-Point Action Plan for the Clean and Beautiful City Program – Proposal for 2005/2006/2007.

The Roundtable on a Beautiful City also considered a report (November 22, 2004) from the Commissioner of Urban Development Services, the Commissioner of Economic Development, Culture and Tourism, and the Acting Commissioner of Works and Emergency Services.

RES.#E4/06 -

STORMWATER ASSESSMENT MONITORING AND PERFORMANCE (SWAMP) PROGRAM

Synthesis of SWAMP Study Findings. Final report synthesizing findings from stormwater facility evaluation studies conducted under the SWAMP program

Moved by: Colleen Jordan
Seconded by: John Sprovieri

THE BOARD RECOMMENDS TO THE AUTHORITY THAT the report entitled ‘Synthesis of Monitoring Studies Conducted under the Stormwater Assessment Monitoring and Performance Program’ be received;

AND FURTHER THAT staff be directed to disseminate study findings to municipal staff, the development industry, and other agencies through technology transfer seminars and a posting on the Sustainable Technologies Evaluation Program website.

CARRIED

BACKGROUND

The Stormwater Assessment Monitoring and Performance Program was formed in 1995 as an initiative of Environment Canada’s Great Lakes Sustainability Fund, the Ontario Ministry of the Environment, Toronto and Region Conservation Authority (TRCA) and the Municipal Engineers Association, along with host municipalities and other owner/operators. The program’s objectives were to:

- monitor and evaluate the effectiveness of conventional or innovative stormwater management technologies; and
- disseminate study results and recommendations within the stormwater management community.

Between 1995 and 2002, a number of different types of stormwater management facilities were monitored and evaluated. Technologies evaluated include stormwater ponds, stormwater pond retrofits, constructed wetlands, perforated pipe exfiltration systems, oil grit separators, underground tanks and a Flow Balancing System.

Other products of the SWAMP program include an investigation of the storage and transport of chloride (a major constituent of road salt) in stormwater ponds, a discussion paper on fundamental concepts of pond systems, a stormwater management (SWM) sediment maintenance guide and the proceedings of three major conferences.

The purpose of the SWAMP synthesis, prepared by TRCA and Marshall Macklin Monaghan, was to compile and analyze information obtained from individual studies as a means of:

- assessing the overall effectiveness and limitations of stormwater management practices evaluated under the program;
- gaining insights into patterns or relationships in datasets for like technologies that may not be evident from individual facility assessments;
- documenting requirements for ongoing maintenance; and
- providing direction for future monitoring programs.

The report also contains a selective literature review that places the SWAMP studies within the larger context of stormwater best management practices (BMP) monitoring in North America and provides a useful supplement to SWAMP study results, especially for practices not monitored under the program.

Some key findings from the SWAMP studies include the following:

- The ponds, wetlands and conveyance facilities evaluated under the SWAMP program were very effective in trapping suspended sediments and associated contaminants. Seasonal load-based removal rates for total suspended solids (TSS) ranged between 81 and 92%. By contrast, phosphorus removal efficiencies ranged between 42 and 87%.
- The two exfiltration systems evaluated provided on-site water budget control by infiltrating over 85% of the stormwater entering the facilities.
- Roughly 65 to 85% of effluent TSS particles in ponds and wetland facilities fell within the clay sized range (<4 microns). Since these particles do not readily settle over the range of detention periods provided by stormwater facilities, further reductions in effluent TSS concentrations may not be practically achievable by simply increasing the volume of storage in the facilities.
- Mean effluent concentrations of several stormwater pollutants (e.g. copper, zinc, E.coli, phosphorus) exceeded receiving water objectives, despite significant reductions in TSS. Meeting stringent receiving water quality objectives for these pollutants is clearly not an 'achievable' goal for facilities that depend primarily on passive settling for water quality treatment.
- Oil grit separators exhibited lower and more variable performance relative to other facilities. Seasonal load based removal efficiencies for TSS were between 50 and 60%.
- Performance of end-of-pipe facilities during the cold season was typically poorer than during warm weather. A reduction in efficiency of at least 5 to 10% during the winter was common for many water quality variables. The lower cold season performance levels may be attributed to reduced permanent pool storage due to ice build-up and the inhibiting effect of cold temperatures and de-icing salts on particle settling processes.
- A comparison of ponds and wetlands showed that, in a very general sense, those with greater permanent pool storage, longer drawdown times and better length-to-width ratios exhibited improved overall performance as measured by load based removal efficiencies and effluent concentration means and ranges.
- Road salts accumulate in ponds and wetlands over the winter and spring, creating toxic conditions for aquatic organisms living in the facilities and possibly contributing to reduced winter performance levels.

- Up to 70% of TSS loads captured by ponds and wetlands settle out in the forebay of the facility. The finding highlights the importance of including forebays designed for maximum sediment capture with features such as drying areas that facilitate sediment clean-out.
- Water temperatures are invariably increased by storage facilities, but bottom draw outlet structures can help to mitigate thermal impacts on downstream aquatic communities. Maximum summer water temperatures from bottom draw outlets were on average 5°C less than from top draw outlets.

Overall, the SWAMP program has contributed to a substantial increase in the body of knowledge regarding the performance of various SWM technologies in Ontario. Since the program was initiated, study results have been used to re-evaluate existing stormwater facility design guidelines, model the watershed wide benefits of stormwater BMPs, define 'achievable' levels of effluent quality or load reductions, assess maintenance requirements and provide insights into the value of different functional components of facilities (e.g. outlet structures, forebays).

There is still, however, much to be learned. Studies conducted under SWAMP addressed only a very small subset of the many different types of practices currently used to manage stormwater. More research on source and conveyance controls in particular is needed. In addition, there is little known about the direct impact of stormwater controls on the health of aquatic life or the geomorphic integrity of downstream channels. Studies of end-of-pipe facilities clearly demonstrate that effluent quality is better and catchment flows are more controlled than would have been the case if stormwater facilities had not been constructed. However, the increase in flow volumes and water temperature from pre-development conditions (among other factors) may still be contributing to degradation of downstream aquatic ecosystems. More research linking stormwater BMPs directly to the health of receiving waters is required to determine whether or not stormwater practices currently in use are providing the environmental benefits so often attributed to them.

These and other issues were discussed at a workshop on the future of SWAMP hosted by the Canadian Water Resources Association (CWRA) in 2003. The workshop was attended by stormwater industry representatives from government agencies, universities, conservation authorities, consultant firms and other groups. The participants generally expressed strong support for the continued existence of a program like SWAMP, but offered several recommendations on how the program could be re-structured and re-focused to provide the information needed to support better protection of the environment.

Building upon workshop recommendations, a new program led by TRCA was formed in 2005, called the Sustainable Technologies Evaluation Program (STEP). The program will evaluate technologies in the broad areas of water/land, air and energy. A discussion paper, finalized in September 2005, summarizes the objectives, operating principles and organizational structure of the water component of this new program.

Copies of the Synthesis of Monitoring Studies Conducted under the Stormwater Assessment Monitoring and Performance Program will be available at the meeting.

FINANCIAL DETAILS

The total cost of this project was \$25,000. Financial contributions were provided by the Government of Canada's Great Lakes Sustainability Fund (\$10,000) and the Ontario Ministry of the Environment (\$15,000). These funds paid for TRCA services and the consultant hired to help with the study.

Report prepared by: Tim Van Seters, extension 5337

For Information contact: Tim Van Seters, extension 5337

Date: March 17, 2006

RES.#E5/06 -

PERMEABLE PAVEMENT AND BIORETENTION SWALE DEMONSTRATION PROJECT

Preliminary results from the permeable pavement and bioretention swale demonstration project at Seneca College, King Campus.

Moved by: John Sproveri

Seconded by: Suzan Hall

THE BOARD RECOMMENDS TO THE AUTHORITY THAT the interim report on the permeable pavement/bioretention swale project be received;

AND FURTHER THAT staff be directed to report back on study results after completion of the study.

CARRIED

BACKGROUND

Several initiatives currently underway in the Greater Toronto Area (GTA) support the use of infiltration technologies as a means of reducing the adverse impacts of stormwater on the environment. These include the Toronto and Region Remedial Action Plan, the Oak Ridges Moraine Conservation Plan, the Toronto Wet Weather flow Management Master Plan and Toronto and Region Conservation Authority's (TRCA's) The Living City strategy. To help provide a basis for wider adoption of these technologies, TRCA's Sustainable Technologies Evaluation Program (STEP), in partnership with Seneca College, initiated a project in the spring of 2004 to monitor and assess the effectiveness and limitations of two stormwater infiltration technologies: permeable pavement and a bio-retention swale.

Permeable pavement refers to a group of technologies designed to allow natural infiltration through typically impervious surfaces, such as parking lots and driveways. Such technologies include porous asphalt, porous concrete, plastic grid systems and interlocking stones. This STEP project evaluates a specific block paver design (manufactured by Unilock) as a representative example of a type of permeable pavement that has shown promise under cold weather conditions.

Bio-retention swales have also been applied to parking lots or road boulevards to improve infiltration and help remove contaminants from road runoff. Bio-retention swales typically consist of small excavated depressions at the curbside that allow runoff from paved surfaces to pond and infiltrate. The swale vegetation, mulch and soils in the swale are specially selected to enhance infiltration, as well as retain and filter contaminants in the upper soil layers before water passes through the system into the groundwater or underground drainage system. Bio-retention swales provide a useful complement to permeable pavement where tight soils limit infiltration rates under the pavement itself.

The STEP study is being conducted on a parking lot at Seneca College in King City, Ontario on the Oak Ridges Moraine. The area is within the Humber River watershed, and drains to a tributary of the East Humber River. Permeameter testing in July 2004, prior to reconstruction of the parking lot, indicated that the field saturated hydraulic conductivity was in the order of 10^{-6} cm/s to 10^{-7} m/s, which roughly corresponds to the permeability of silty clay.

The parking lot for this study was reconstructed and specially designed in the summer and fall of 2004 to facilitate evaluation of the various benefits and limitations of the two technologies. The parking lot is divided into three equal sized sections for the permeable pavement, bioswale and a conventional asphalt control area. Parking lot runoff is being collected both at the road surface level and as leachate from the native soil approximately 1.5 meters beneath the permeable pavement and bioswale. The permeable pavement and bioswale areas are lined with impermeable plastic membrane overlaid with weeping tile to allow for monitoring of water passing through the soils. All monitoring equipment is located underground in a large sampling vault and is powered by a combination of a wind turbine and three solar panels (installed in the summer of 2005).

The first interim report for this project, prepared in March 2005, includes a review of literature on permeable pavement and bioswales and describes the overall study design. The second interim report completed in March 2006, discusses preliminary results from monitoring over a four month period in the late summer, fall and early winter of 2005. The main study findings were as follows:

- No surface runoff from the permeable pavement was measured, even during relatively high intensity storm events with over 30 mm of total rainfall.
- The bioretention swale infiltrated most of the surface runoff, but overflowed during large (> 25 mm) or high intensity events.
- Bio-swale runoff volumes from the underdrain were less than the permeable pavement site even when the swale did not overflow because some runoff is held in the root zone and released to the atmosphere through evapotranspiration.
- The permeable pavement and bioretention swale reduced peak flow rates by over 95% relative to the control pavement area. Runoff was stored and released over a period of several days after each rain event.

- Although only 8 events were sampled in 2005, the water quality monitoring data generally indicated that the two infiltration practices were effective in removing most contaminants typically associated with parking lot runoff. Concentrations of TSS, nutrients, hydrocarbons and most metals in effluent from the permeable pavement underdrain met provincial objectives or other guidelines for the protection of receiving waters. Copper concentrations were slightly elevated, possibly due to leaching from the native soils or drainage materials. Phosphorus was elevated in samples from the bioswale underdrain because the soils used in the swale contained some composted manure.

Cores were extracted from the soils beneath the permeable pavement and bioretention swale in the late fall of 2005 and submitted to the Ontario Ministry of the Environment laboratory in Etobicoke for chemical analysis. Unfortunately, a complete set of laboratory reports were not available when preparing the interim report. A discussion of soil quality data will be provided in the next interim report. CD copies of the interim report on the permeable pavement/bioretention swale project will be available the meeting.

Other components that will be added to the monitoring set-up in 2006 include: (i) surface temperature measurements on the conventional asphalt and permeable pavement surfaces to help assess whether or not interlocking stone helps to reduce the urban heat island effect; (ii) two pressure transducers installed within the permeable pavement subgrade to measure subgrade water level changes during rain events, and (iii) one pressure transducer in the swale to measure surface water level changes and the duration of overflow during rain events.

As monitoring continues through 2006 and 2007, more will be learned about the performance and maintenance requirements of the permeable pavement and bioretention swale. Findings from the entire three years of monitoring will be used to evaluate their potential application on other new and reconstructed parking lots. The final report will be disseminated through a variety of sources (print, web, conferences), and results will also be incorporated into watershed and sub-watershed planning studies.

Preliminary results of the permeable pavement and bioswale demonstration project will be presented at a 'green technology' seminar hosted by TRCA in May 2006 at Seneca College in King City. Copies of the second interim report will be made available to board members upon request.

DETAILS OF WORK TO BE DONE

The following table shows the schedule of project activities:

Activity	Schedule	Status
Design Plan of Parking Lot and Study Area	August 2004	Complete
Construction of Permeable Pavement Parking Lot and Bioswale	August/September 2004	Complete
Develop Monitoring Program	November/December 2004	Complete
Report of activities to date, monitoring design, monitoring protocol, and activities for 2005.	March 2005	Complete
Monitoring	January to November 2005/2006/2007	On-going
Year end report	March 2005/2006/2007	two of three completed
Final Report	March 2008	to be completed

FINANCIAL DETAILS

The following table lists project partners and proposed/approved funding for fiscal year 2006/07.

Partner	Funding Status	Funding Type	2006/07 Contribution (\$000)	
			Proposed	Approved
Toronto, York, Peel	Approved	cash		30
RAP MOU (Environment Canada, MOE)	Proposed	cash	35	
The Ministry of the Environment	Approved	laboratory services		29
The Great Lakes Sustainability Fund (Gov't of Canada)	Proposed	cash	20	
Interlocking Concrete Pavement Association	Approved	cash		5.5
Total			55	55.5

It is expected that a full year of monitoring, data analysis and interim report preparation will cost approximately \$100,000 in 2006/07, of which \$20,000 will be in-kind contributions for lab services from the Ministry of the Environment. An additional \$10,000 will be needed to fine-tune the experimental design and purchase additional monitoring instruments (as proposed in the interim report).

The site was constructed in late 2004, at an approximate cost of \$88,000 which included labour, construction material purchases, machinery rental and landscaping. Approximately \$38,000 in donated materials was supplied by Unilock, Hanson Canada, Layfield Geotextiles and EMCO Ltd. Seneca College provided the wind turbine, one solar panel and some of the electrical supply materials (approximately \$15,000).

Funding contributions in earlier years were received from the Pat and John McCutcheon Foundation (\$20,000), the Oak Ridges Moraine Foundation (\$25,000) Wal Mart (\$10,000), the Great Lakes Sustainability Fund (\$25,000), Remedial Action Plan Memorandum of Understanding (\$30,000), City of Toronto (\$10,000), Region of Peel (\$5,000) and Region of York (\$5,000).

TRCA continues to seek new partners willing to contribute cash or in-kind materials or services to the project for the remaining years of the project.

Report prepared by: Tim Van Seters, extension 5337
For Information contact: Tim Van Seters, extension 5337
Date: March 17, 2006

RES.#E6/06 -

GREENING RETAIL

A New Program of The Living City. Recommendation that staff develop partnerships for the development and implementation of the Greening Retail program.

Moved by: David Gurin
Seconded by: Linda Pabst

THE BOARD RECOMMENDS TO THE AUTHORITY THAT staff pursue funding and partnership opportunities in order to develop and implement a new program of The Living City that engages the retail sector in the application of sustainable practices and technologies.

CARRIED

BACKGROUND

The retail sector has the potential to effect significant change in society in a way that no other industry can because of its broad reach. Retailers can define environmentally oriented purchasing requirements. At the store level, they can educate consumers. Retailers control and act as the gatekeeper for the goods and services consumers are offered. As such, retailers have the ability to influence behaviour and consumption patterns.

- One in every eight workers in Canada is employed in retail.
- There are 1.2 million retail and service business locations in Canada.
- Retail occupies 350 million sq.ft. of shopping centre space, 90 million sq.ft. in power centres and 660 million sq.ft. of other retail space.
- There are 30sq.ft. of retail space per person in Canada.
- In 2004, total Canadian retail trade was \$346 billion.
- Ontario accounts for over 40% of Canadian retail space and sales.

The sheer scale of the retail sector points to the significant role it could play in building a sustainable future. For example even small in-roads in the application of best practice across the retail sector can have a significant impact. If 5% of retailers and their suppliers in Canada were to participate in energy reduction programs and achieved energy savings of 10%, the estimated savings in year 1 would be:

- at retail locations 3.5 Pj (pica joules of energy)
- at related supply chain 8.0 Pj
- at related transportation 5.1 Pj
- Total 16.6 Pj

The magnitude of this potential savings is equivalent to the energy needs of 465,000 homes for a year or taking 233,000 cars off the road for a year, and could reduce green house gas (GHG) emissions by 1.3 million tonnes.

The goal in developing a Greening Retail program would be to provide retailers with specific tools, strategies and programs to improve their energy efficiency and environmental performance, and play a major part in the transformation of society towards improving the environment. The project would demonstrate to retailers that undertaking these initiatives can enhance their bottom line and thus makes good business sense.

Development of the Greening Retail program will be undertaken in three phases. Phase I, which is underway focuses on secondary research and focus groups/meetings to identify international benchmarks, tangible achievements and development of a framework of areas to be targeted for primary research in Phase II; Phase II will consist of interviews and documentation of best environmental practices of the leading retailers around the world, Phase III will focus on developing and delivering programs, tools and other mechanisms to engage the retail sector in adopting and implementing best practices. We would aim to work with three to five retailers to implement programs to demonstrate processes and savings in Phase III.

The program would be developed in partnership with the Center for the Study of Commercial Activity, Ryerson University, Retail Council of Canada, Environment Canada, Ontario Ministry of Economic Development and Trade, the Ontario Ministry of the Environment, along with other sector associations and major retailers.

RATIONALE

The extent and influence of the retail sector and its suppliers makes their engagement in the application of environmental best practices, key to achieving the sustainable community objective under The Living City vision.

Development of strong working relationships with major retailers and their suppliers in the Greater Toronto Area (GTA) may assist Toronto and Region Conservation Authority (TRCA) with achieving other objectives of The Living City such as Healthy Rivers and Shorelines, and Regional Biodiversity.

The Greening Retail program may also assist The Conservation Foundation of Greater Toronto with developing financial support for the work of TRCA.

FINANCIAL DETAILS

ACTIVITY	BUDGET
PHASE I	
● Background Research	\$17,000
● Meetings/Focus Groups	\$9,000
● Phase I Report	\$5,000
Sub-Total	\$31,000
PHASE II	
● Protocol Development and Meetings with Best Practice Retailers	\$127,000
● Reporting and Communications	\$22,000
Sub-Total	\$149,000
PHASE III	
● To Be Determined	
TOTAL	\$180,000

The Conservation Foundation of Greater Toronto has been successful in securing \$31,000 in support for Phase I. This includes \$25,000 from Environment Canada and \$6,000 in-kind from the foundation through an international student.

The Phase I report will be finalized in late April once the meetings and focus groups with retailers has been completed. The results of Phase I and feedback from retailers will provide the basis for staff and the Conservation Foundation to pursue funding and partnerships in support of Phases II and III.

Report prepared by: Bernie McIntyre, extension 5326
For Information contact: Bernie McIntyre, extension 5326
Date: March 28, 2006

RES.#E7/06 - MAYORS' MEGAWATT CHALLENGE
 Status of Membership. Participation in the Mayors' Megawatt Challenge by municipalities in Toronto and Region Conservation Authority's jurisdiction.

Moved by: Suzan Hall
 Seconded by: Colleen Jordan

THE BOARD RECOMMENDS TO THE AUTHORITY THAT Members of Toronto and Region Conservation Authority (TRCA) whose municipalities are not participating in the Mayors' Megawatt Challenge be requested to encourage them to join the program.

CARRIED

BACKGROUND

The Mayors' Megawatt Challenge brings municipalities together to improve energy efficiency and environmental management in their own buildings. Through the Mayors' Megawatt Challenge municipalities demonstrate leadership, inspiring other organizations and individuals to take action towards healthier, more sustainable communities.

The Mayors' Megawatt Challenge program helps municipalities improve the energy efficiency of their own facilities. The program provides:

- a web-based utilities management system;
- quarterly workshops to explore and assess benchmarking, action plans, best practices and actual savings;
- on-line tools for analyzing and budgeting energy use;
- collaborative projects;
- best practices checklists; and
- newsletters, awards and media releases.

At Authority Meeting #8/05, held on October 28, 2005, Resolution #A239/05, in regards to the Mayors' Megawatt Challenge, was approved as follows:

THAT Members of Toronto and Region Conservation Authority (TRCA) whose municipalities are not participating in the Mayors' Megawatt Challenge be requested to encourage them to join the program;

AND FURTHER THAT staff report back with an update of the status of membership in the Mayors' Megawatt Challenge at the Sustainable Communities Board meeting to be held on December 2, 2005.

Since that board report, no additional municipalities have joined the program although staff at the Town of Markham have requested additional information for consideration. Staff will be presenting the Mayors' Megawatt Challenge at the Municipal Energy Summit being organized by the Ontario Power Authority, the Association of Municipalities of Ontario and the Region of Peel, on March 29, 2006. This will be a significant opportunity to profile the program in front of a large audience of municipalities. Municipalities currently participating in the program include:

- Toronto
- Richmond Hill
- Brampton
- Mississauga
- Ajax
- Milton
- Barrie
- Burlington
- Oshawa
- Guelph
- Kitchener
- Waterloo
- St. Catherines

The Mayors' Megawatt Challenge program has continued to move forward, with additional workshops on October 20, 2005 and February 1, 2006. The 13 municipalities participating in the program have continued to add buildings to the on-line utility management system with more than 150 municipal facilities in the on-line system. The on-line utility system is now able to accept digital electricity data directly from a utility data hub providing an additional valuable service to the participating municipalities. Fifty percent of the buildings enrolled in the program have shown savings in the total energy used and thus reduced costs.

Where common opportunities are identified, the Mayors' Megawatt Challenge also organizes collaborative projects to share resources and obtain economies of scale. The Arenas Project is one such collaborative initiative. The goal of the Arenas Project is to achieve large-scale energy and water use savings in arena facilities across the Greater Golden Horseshoe, through identification and implementation of comprehensive energy retrofit projects and operational best practices. Previous work by Natural Resources Canada (NRCan) and Hydro One has indicated energy savings potential averaging 25-40% in arena facilities, with paybacks in the order of 5 years, and with cost savings in the order of \$20,000/year.

There are now 6 municipalities participating in the Arenas Project with nearly 20 arenas enrolled to date. By collaborating through the Mayors' Megawatt Challenge, the participants achieve an economy of scale that would normally only be achieved by the largest municipalities. A proposal for funding to support this project has been submitted to the Federation of Canadian Municipalities and a proposal will be submitted to the Ontario Power Authority next month. Staff are in negotiation with local distribution companies (LDC's) such as Hydro One Networks to obtain additional project funding for municipalities in Hydro One's area of service. The Arenas Project provides significant value to participating municipalities by leveraging their monetary contributions 6 to 1.

RATIONALE

The Mayors' Megawatt Challenge was one of the first new programs developed to support The Living City vision and represents an important extension of TRCA's role in assisting municipalities with embracing sustainability.

In 2006 the program will be working with participants to develop conservation action plans in accordance with the proposed Provincial Conservation Leadership Legislation, which as proposed will make these plans mandatory.

The value of the program is linked in part to the collaboration that it fosters. The more participants, the more opportunity there is for sharing of knowledge, experience, peer learning and economies of scale in collaborative projects.

FINANCIAL DETAILS

The Mayors' Megawatt Challenge is supported financially through participant fees, grants from NRCan and contributions from LDC's. PowerStream Inc, a major partner with TRCA in advancing The Living City has been a strong supporter of this program. Other LDC's involved include Barrie Hydro, Hydro One Brampton and Enersource.

Report prepared by: Bernie McIntyre, extension 5326
For Information contact: Bernie McIntyre, extension 5326
Date: March 23, 2006

SECTION IV - ITEMS FOR THE INFORMATION OF THE BOARD

RES.#E8/06 - MARKHAM BYPASS CORRIDOR INDIVIDUAL ENVIRONMENTAL ASSESSMENT

Transportation Improvements. Receipt of the staff report on transportation improvements in the Markham Bypass Corridor Individual Environmental Assessment.

Moved by: Suzan Hall
Seconded by: Dick O'Brien

IT IS RECOMMENDED THAT the staff report on the Individual Environmental Assessment submitted by York Region for transportation improvements in the Markham Bypass Corridor be received.

CARRIED

BACKGROUND

Toronto and Region Conservation Authority (TRCA) staff has completed its review of the Individual Environmental Assessment (EA) submitted by York Region for transportation improvements in the Markham Bypass Corridor dated December 2005, as well as supplementary information prepared by York Region to the Ministry of Environment, dated February 16, 2006. It is understood that this supplementary information has been added to the EA for consideration by the Minister of Environment in her review of the EA. It is further understood that concerns with this project have been raised by individuals, as well as the City of Toronto. It is the Minister's responsibility to respond to these concerns, and TRCA staff understand that this review is underway.

The preferred alignment for this road is option A3b Modified which will involve 4 new crossings (Neilson Tributary, Morningside Tributary, Rouge River and Tributary B of the Little Rouge Creek) of the Rouge River watershed within York Region and the City of Toronto. Should the EA be approved by the Minister, funding options will need to be explored by the municipalities.

Staff has advised the Ministry of Environment that this project meets the programs and policies of TRCA, and staff has no objection in principle to the needs assessment or preferred alternative selected for this section of the Markham Bypass Corridor. This project has been planned with regard to the TRCA Valley and Stream Corridor Management Program, the draft TRCA Terrestrial Natural Heritage System Strategy, the TRCA Rouge River Fisheries Management Plan, and the Rouge Park and Rouge Park North management plans.

As a member of the technical advisory committee, TRCA worked with Region of York, City of Toronto and Rouge Park staff to ensure that the selection and preliminary design of the preferred alternative was done with the highest regard to the natural environment of the Rouge River watershed. This project was planned to connect the two built sections of the bypass, starting in the City of Toronto where Morningside Extension terminates, and ending at Highway 407 in York Region where Markham Bypass (north) has been built. This was done through site investigations as well as the submission of detailed technical reports and preliminary design details, as referenced in the EA and the supporting documentation. Through these meetings and discussions, all TRCA staff concerns with respect to the EA have been addressed. As such, staff concur with the selection of the alternative route chosen and the functional design developed as the best approach to completing the Markham Bypass and are satisfied that the Region of York has taken the necessary steps to minimize the potential for environmental impact.

Should this project be approved by the Minister, TRCA has advised York Region and the City of Toronto that permits in accordance with regulations made under the Conservation Authorities Act will be required in order for this project to proceed. Preliminary requirements of TRCA regarding the design of the road, stormwater management facilities and crossing structures has been incorporated in the EA. At detailed design, staff requirements will be fully detailed. As such, TRCA endorsement of the preliminary design for the structures are conceptual only. This is recognized in the EA and supporting documentation, as commitment has been made to addressing all concerns related to the detailed design of this project through the TRCA permitting process.

Report prepared by: Beth Williston, extension 5217
For Information contact: Beth Williston, extension 5217
Date: March 27, 2005
Attachments: 1

Attachment 1



TRANSPORTATION IMPROVEMENTS
IN THE MARKHAM BYPASS CORRIDOR
SOUTH OF HIGHWAY 407
ENVIRONMENTAL ASSESSMENT

STUDY AREA

EXHIBIT
1-1

RES.#E9/06 -

SUSTAINABLE TECHNOLOGIES EVALUATION PROGRAM

Launch of the Sustainable Technologies Evaluation Program (STEP) and outline of future work to be completed.

Moved by: John Sprovieri
Seconded by: Colleen Jordan

IT IS RECOMMENDED THAT the staff report on the Sustainable Technologies Evaluation Program (STEP) be received.

BACKGROUND

The idea for a Toronto and Region Conservation Authority (TRCA) led program that evaluates environmental technologies originated from an earlier multi-agency program in which TRCA was a partner, the Stormwater Assessment Monitoring and Performance (SWAMP) Program. The SWAMP program operated from 1995 to 2003 out of the Ontario Ministry of the Environment offices in Etobicoke. In 2003, as the SWAMP program neared the end of its mandate, a workshop hosted by the Canadian Water Resources Association (CWRA) was convened to review the program objectives and explore how the program could be improved or re-organized to better serve the evolving needs of the stormwater management community. The workshop was attended by stormwater industry representatives from government agencies, universities, conservation authorities, consultant firms and other groups. The participants generally expressed strong support for the continued existence of a program like SWAMP. However, participants thought that the original mandate should be broadened to include greater focus on stormwater pollution prevention, source controls, construction phase measures, cost factors, maintenance, management and operating practices (e.g. street cleaning), and restoration. There were also several recommendations on how the program could be improved from a functional and organizational standpoint.

In response to these recommendations, TRCA's Sustainable Technologies Evaluation Program (STEP) was developed in 2005. The program, which has a much broader focus than its predecessor, helps to fulfill the goals of several regional initiatives, including the Toronto Region Remedial Action Plan, the Toronto Wet Weather Flow Management Master Plan, Drinking Water Source Protection Plans and TRCA's vision for The Living City, a sustainable and more livable community in the Toronto region. Its main objectives are to:

- monitor and evaluate sustainable technologies in the areas of water/land, energy and air;
- assess potential barriers to implementing sustainable technologies;
- provide recommendations for guideline and policy development; and
- disseminate study results and recommendations and promote the use of effective technologies at a broader scale through education and advocacy.

Technologies evaluated under STEP are not limited to physical structures; they may also include preventative measures, implementation protocols, alternative urban site designs or other practices which promote more sustainable ways of living.

A website highlighting sustainable technology monitoring and research by STEP, SWAMP and other agencies is currently being developed. The site will be hosted by Seneca College's server as an in-kind contribution to the program. The STEP website will not only disseminate information about STEP projects, but also provide a portal through which developers, private organizations, universities, government/non-governmental agencies and the general public can access and learn about work being undertaken by other groups on sustainable technologies.

Overall direction of the program will be guided by a steering committee made up of representatives from the Government of Canada's Great Lakes Sustainability fund, Fisheries and Oceans Canada, the Ontario Ministry of the Environment, regional municipalities (York, Peel and Toronto), TRCA, the academic community (represented by the Ontario Centres of Excellence), the Urban Development Institute and the consulting industry. A technical sub-group of the committee will advise on issues related to study design, monitoring protocols and data analysis methodologies. The first meeting of the steering committee is planned for April, 2006.

A discussion paper prepared for the water component of the program provides further details regarding the context, operational principles, organizational structure and mandate of the program. The paper will be made available to board members upon request.

DETAILS OF WORK TO BE DONE

Currently several technologies are being evaluated or are undergoing evaluation under the program. These include:

- rooftop garden;
- permeable pavement;
- bio-retention swale;
- erosion and sediment control pond;
- air biofiltration system; and
- rainwater harvesting system.

Final reports for the rooftop garden at York University and the Erosion and Sediment Control Pond will be available later this year. The website is an ongoing initiative but the core content is expected to be completed by the summer of 2006. Interim reports for all other projects are available, except the rainwater harvesting project, which begins this year.

In future years, STEP will conduct evaluations of the 'sustainable house demonstration project' planned for The Living City Centre Campus, various stormwater source and conveyance controls, and other projects yet to be identified. Discussion papers will be prepared for the air and energy components of the program to define directions for research. TRCA will also host a green technology seminar in May 2006 to announce the launch of STEP.

FINANCIAL DETAILS

The following table lists project/program contributions for fiscal year 2006/07.

Funding Sources (\$000's)/Partners:

	2006/07	Status
Toronto	40	Confirmed
York Region	20	Confirmed
Peel Region	20	Confirmed
Durham Region	0	--
Other - GLSF	80	Proposed
- RAP MOU	70	Proposed
- local municipalities	10	Proposed
- DFO, others	30	Proposed
Sub-total	270	
In-kind Contributions		
OMOE	110	Proposed
Other (Seneca)	10	Confirmed
Sub-total	130	
GRAND TOTAL	400	

TRCA continues to seek new partners willing to contribute cash or in-kind materials or services to the project for future years.

Report prepared by: Tim Van Seters, extension 5337
For Information contact: Tim Van Seters, extension 5337
Glenn MacMillan, extension 5212

Date: March 17, 2006

TERMINATION

ON MOTION, the meeting terminated at 11:30 a.m., on Friday, April 7, 2006.

Michael Di Biase
Chair

Brian Denney
Secretary-Treasurer

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