



# GREENING

the economy



A photograph of a person walking away from the camera down a dirt path in a forest. The path is covered in fallen autumn leaves in shades of yellow, orange, and brown. The person is wearing a dark jacket, blue jeans, and a light-colored bag. The forest is dense with trees, and the sunlight filters through the canopy, creating a warm, golden glow. The top of the image has a blue overlay with white text.

## **OUR VISION**

The quality of life on Earth is being created in rapidly expanding city regions. Our vision is for a new kind of community—The Living City®—where human settlement can flourish forever as part of nature's beauty and diversity.

## **OUR MISSION**

is to work with our partners to ensure that The Living City® is built upon a natural foundation of healthy rivers and shorelines, greenspace and biodiversity, and sustainable communities.



# CONTENTS

---

<b>MESSAGE FROM THE CHAIR</b>	<b>2</b>	<b>BUSINESS EXCELLENCE</b>	
<b>MESSAGE FROM THE CAO</b>	<b>3</b>	<b>FEATURE STORIES</b>	
<b>HEALTHY RIVERS AND SHORELINES</b>		Greening Jobs	58
<b>FEATURE STORIES</b>		Greening the Economy	60
Greening the Bottom Line	4	<b>BUSINESS EXCELLENCE</b>	<b>62</b>
Flood Management Technology at TRCA	6	Information and Technology Services	62
<b>HEALTHY RIVERS AND SHORELINES</b>	<b>8</b>	Sustainability Management System	63
Watersheds	8	Volunteerism and Diversity	63
Watershed Planning and Management	18	Marketing and Communications	65
Source Water Protection	20	Recognition Awards	66
Flood Management	22	Conservation Foundation	66
<b>REGIONAL BIODIVERSITY</b>		Financial Overview	67
<b>FEATURE STORY</b>		<b>MEMBER MUNICIPALITIES AND</b>	
Greening the GTA	24	<b>MEMBERS</b>	<b>68</b>
<b>REGIONAL BIODIVERSITY</b>	<b>26</b>	<b>EXECUTIVE COMMITTEE</b>	<b>68</b>
Conservation Lands	26	<b>TORONTO AND REGION CONSERVATION</b>	
Natural Heritage	28	<b>AUTHORITY SUMMARIZED FINANCIAL</b>	
Habitat Restoration	31	<b>STATEMENTS</b>	<b>69</b>
<b>SUSTAINABLE COMMUNITIES</b>		Auditors' Report	69
<b>FEATURE STORIES</b>		Summarized Statement of Financial Activities and Deficit	70
Greening the Building Industry	36	Summarized Statement of Financial Position	71
Greening Young Minds	38	<b>TRCA MAP</b>	<b>72</b>
<b>SUSTAINABLE COMMUNITIES</b>	<b>40</b>		
The Living City®	40		
Planning and Development	47		
Stewardship	49		
Education	50		
Parks	53		
Cultural Heritage	55		

## MESSAGE FROM THE CHAIR

I want to begin by thanking our municipal partners, in particular for the financial and policy support that enables TRCA to continue to be successful in its many areas of effort. Even as the recession was beginning to affect growth rates and revenue sources, our municipalities saw the value in the watershed-based approach to environmental management and continued to provide solid support to TRCA.

In addition, the continued support from the Province of Ontario for the source water protection projects allowed that important work to advance toward the development of a comprehensive plan by 2012. The collaboration among the Government of Canada, the Province of Ontario and the City of Toronto, represented by Waterfront Toronto, also provided substantial resources to TRCA that enabled continued progress on important waterfront projects across Toronto.

I want to express my personal thanks to the members of the board. As one of only a few organizations with a broad, regional mandate it is exciting and rewarding to see how our members continue to see the big picture. Their support of programs ranging from cultural heritage to climate change enables great progress. It is also rewarding to watch the friendly competition among municipalities to advance the "green" agenda.



As I travel around to various events at TRCA facilities I am always pleased by the amount of community support shown by literally thousands of volunteers who participate so enthusiastically in TRCA's wide range of projects. Whether we are opening a new waterfront park or celebrating the acquisition of beautiful greenspace on the Oak Ridges Moraine, and everything in between, there are always community leaders and volunteers involved. This grass roots involvement is what helps to ensure that TRCA is meeting the real, strategic needs of our rapidly growing communities.

One of the most exciting projects in 2008 was the start of work on the new head office for TRCA. The existing building is seriously beyond capacity and the need to assign staff to many different locations does impact on effective communication and coordination. We must find a way to get the new building underway by 2010.

I hope you find this summary of our efforts in 2008 to be an encouraging sign of progress but also an inspiration to join the campaign to create The Living City®.

Gerri Lynn O'Connor

## MESSAGE FROM THE CAO

We have chosen to use the global economic slowdown, that dominated the news during 2008, to focus in this annual report on the work of TRCA that seeks to support the green economy of the future. Having had considerable success, over the last five years, along with many others, in elevating the level of awareness of the role of buildings in combating climate change, our efforts in 2008 began to focus more on the role of green jobs in the economic recovery.

There are many aspects of TRCA's green jobs activity. We have for decades provided great learning opportunities at the Kortright Centre for those who were interested in learning to install renewable energy products. The Archetype Sustainable Houses provide great new opportunities for not only a wider range of technologies but a training ground for more tradespeople who will be needed to install these products as they become part of the residential housing market.

We have also expanded our green building focus to tackle more, large scale retrofits of the existing building stock. While some of our early projects on municipal buildings, schools and hospitals were focused on energy and water use in existing operations, the Partners in Project Green initiative, which is highlighted in this report, expands TRCA's activities into large scale community transformation. Starting with what is already Canada's largest employment zone, we believe that the prospects for creating a major new demand and supply of green technologies, in this critically important hub of economic activity, is vital to the future of the GTA.

Toronto and Region Conservation Authority is also re-examining its role in near urban agriculture. By acting as the host organization for the Greater Toronto Area Agricultural Action Committee, we are assisting in the efforts to strengthen the connections between food producers and



consumers. At the same time we are creating opportunities for TRCA lands to be used for more demonstrations of innovative, near urban agriculture. Transportation of food products around the world is a major source of green house gases. Since food production and processing is one of the largest single areas of employment in Ontario, it is clear that this industry will be critical in the green jobs of the future. Enhancing the viability of agriculture in Southern Ontario will also be critical to the success of the Greenbelt initiative.

All aspects of TRCA's work are part of the green economy of the future. Whether it be renewable energy technologies, green space systems that make communities unique and enjoyable, processes to keep our water safe and abundant or cultural programming that celebrates our history and diversity, all of these activities contribute to making our part of the GTA a desirable place to live and work for those innovative people who will shape the future.

I want to congratulate all of the staff of TRCA for another outstanding year of progress in a rich array of projects and programming. I am also pleased to express on behalf of the staff, our sincere appreciation for the support of our Chair and the members of our Board for their dedication and leadership. Our member municipalities and all of our other funding partners, make it possible for us to continue serving the public of our region in a way that we all hope will add to the quality of life for many generations to come.

A handwritten signature in black ink that reads "Brian Denney". The signature is fluid and cursive, with the first name and last name clearly distinguishable.

Brian Denney, P.Eng.



*“Through Partners in Project Green, TRCA will be able to continue working with industry leaders to promote the adoption of green technology.”*





## Greening the Bottom Line

The first plane landed in what was then known as the Malton Airport in 1938 and at the time no one knew how big this area was going to become. Seventy-one years later, the area surrounding Toronto Pearson International Airport has become a growing industrial zone, with an estimated 12,500 businesses providing employment for more than 355,000 people. This was one of Canada's largest employment areas, and it was also a big consumer of energy. On a yearly basis, the area consumes approximately 5.8 million Megawatt hours of electricity, 46 million Gigajoules of natural gas, and 109 million cubic metres of water resulting in 1.7 million tonnes of greenhouse gas emissions related to energy consumption.

It was all about to change when on October 9, 2008 more than 250 business leaders and government representatives gathered at Toronto Pearson International Airport to launch an innovative green strategy. A strategy that could potentially turn the area into a world-class region for eco-innovation where waste becomes usable bio-gas, where businesses work together to green their bottom line and where commuters make sustainable transportation choices resulting in a healthier and more enjoyable place to work.

The launch was a sign of what was to come in the dawning of a green economy and was already attracting companies such as Molson, Coca-Cola, Woodbine Entertainment Group, Pratt & Whitney, and Bayer. They were part of a growing number of businesses that wanted to run their company using green business practices while respecting and working in partnership with nature.

Partners in Project Green (PPG): A Pearson Eco-Business Zone, is the first large scale effort by organizations, businesses, and governments in the GTA to address climate change by pooling resources together.

Leading this immense project to transform 12,000 hectares of industrial and commercial land surrounding Toronto Pearson International Airport into North America's largest eco-business zone was Toronto and Region Conservation Authority (TRCA) and the Greater Toronto Airports Authority (GTAA).

"Through Partners in Project Green, TRCA will be able to continue to work with industry leaders to promote the adoption of green technology," said Brian Denney, CAO for TRCA. "The business community can do more by working together than apart. This is an historic first step to making Toronto the greenest place to do business."

Businesses too were excited with the project that was going to bring a collaborative effort to help bring sustainable business practices into reality. A business-led steering committee currently drives the initiative and consists of private and public sector leaders that have a direct interest in the Pearson Eco-Business Zone.

Partners in Project Green is developing programs to assist the business community to improve their financial and environmental performance. Eco-Efficiency, Sustainable Energy Plan, Employee Transportation, Green Parking Lot, Green Jobs and Employee Planting, Green Purchasing Block Program, and Food Waste Re-Use are just some of the initiatives on the go with many more to come in upcoming years.

## Flood Warning Management Technology at TRCA

Rain is good for plants and vegetation, but too much can cause severe damage to property and can jeopardize people's safety. No matter how dangerous, flooding is a natural occurrence, and records show that flooding has been a problem in the region since the first flood was accounted for in 1797.

Flooding is more prone to occur in urbanized areas that have many rivers, such as the GTA. It is known that urbanization increases runoff two to six times more than it would under natural conditions.

What most people don't know is that flooding can be properly managed. It is one of TRCA's mandates to reduce the risk to life and damage to property by providing the public with information so that they can respond to potential flood emergencies.

Toronto and Region Conservation Authority has flood duty officers that monitor nine watersheds for flooding 24 hours a day, seven days a week. On June 23, 2008, TRCA monitored an intense, localized storm event which dumped approximately 65 millimetres of rain over a 45-minute period in Toronto. Flood duty officers quickly determined

the expected magnitude of flooding during the storm and dispatched Toronto Roads and Toronto Police out to Bayview Avenue where flooding was imminent. The Toronto Police arrived in their Mobile Command Unit to further monitor the situation and closed off several lanes of traffic, protecting the safety of the public using that roadway. Toronto and Region Conservation Authority also monitored the conditions at the G. Ross Lord Dam and immediately saw a need to optimize dam operations to minimize flood risk.

If it wasn't for the major upgrade to TRCA's Flood Water Gauge System in 2006, the storm could have created havoc on the city's streets. Prior to the upgrade, staff didn't have time to react to a storm's development. The deficiencies prompted TRCA to modernize its monitoring system by upgrading from a 24 baud dial-up modem to a state of the art web-based Flood Warning System that delivered data using a cellular communication based network.

The new system automates the collection, calculation and organization of stream flow and precipitation gauge data in 17 locations across the GTA every five minutes. It also provides a warning and call-out system that alerts TRCA staff if water levels exceed a set threshold.





*“Toronto and Region Conservation Authority’s monitoring systems are currently being used by the City of Toronto for its Wet Weather Flow Master Plan and used by Credit Valley Conservation to help monitor flooding in its area.”*

“With the old system it used to take between two to three hours to download raw data and put it into an excel file,” said Jamie Duncan, Water Resources Data Management Analyst, TRCA. “By then a storm can quickly get worse, leaving staff with little time to react. Now with this fully automated system it takes only six minutes to do the operation. Staff is now able to spend time communicating during emergency procedures. More time to react and move forward.”

The Real Time Stream and Precipitation Data is available to staff and members of the public through a website [www.trcagauging.ca](http://www.trcagauging.ca), where numerical; and graphical views of the data and images from a live camera are available.

Having a web-based tool is invaluable for the sharing of information which results in a greater understanding of a storm’s development as it moves through the region. More and more organizations are partnering together to share information, pool resources and offset costs. Toronto and Region Conservation Authority’s monitoring systems is currently being used by the City of Toronto for its Wet Weather Flow Master Plan and used by Credit Valley Conservation to help monitor flooding in its area. The data collected in other conservation areas will provide a complete picture of a storm and will assist in more accurate forecasting.

With increased population growth and urbanization in the next few years, flooding will continue to be a significant risk, and TRCA will be there with new tools ready to capture information and save lives.



# HEALTHY RIVERS AND SHORELINES



Mimico Waterfront Park

## WATERSHEDS

### Toronto Waterfront

#### **Mimico Waterfront Park — Phase one**

After six years of planning and approvals, and two and a half years of construction, the new Waterfront Park opened to the public on July 28, 2008. The first phase of the project spans from Superior Avenue Parkette to Norris Crescent Parkette. This new park in south Etobicoke is one of several economic revitalization projects planned. In addition to providing a connection between three local parks, the park amenity boasts a new section of the Waterfront Trail, a viewing boardwalk and cobble beaches.

Planning and funding approvals with Waterfront Toronto continued in 2008 for phase two of the project, which could see construction beginning in 2010. When phase two is complete, the Mimico Waterfront Park will extend the Waterfront Trail along the shores of Lake Ontario an additional 1.1 kilometres west of the Humber Bay Park Complex.

#### **Port Union Waterfront Park — Phase two**

In early 2008, the waterfront team successfully negotiated an agreement with Waterfront Toronto to fund the second phase of the Port Union Waterfront Park project. Construction of phase two commenced mid-March 2008, following the resolution of outstanding property issues. When complete, the Port Union Waterfront Park will offer a waterfront park amenity that provides a new 3.8 kilometre section of the Waterfront Trail between Highland Creek and the Rouge River, in Scarborough. The second phase of the project is expected to be substantially complete in 2011. The park features include a series of six headlands and cobble beaches, a pedestrian trail stretching between Chesterton Shores and Rouge Beach Park, and a connection to the waterfront trail system in the City of Pickering.

#### **Tommy Thompson Park**

In fall 2008, the waterfront team successfully negotiated with Waterfront Toronto to enable additional habitat enhancement activities and additional shoreline protection works. The Tommy Thompson Park (TTP) Master Plan Implementation Project continued in 2008 with substantial



completion set for 2010. The waterfront team continued discussions with City of Toronto to finalize an Operations and Management Plan.

### Partnerships

The waterfront team continued its partnership with City of Toronto through the planning and development of the Western Waterfront Master Plan, the Toronto Beaches Plan and two Storm Sewer Outfall studies — one in Etobicoke and one in Scarborough.

In partnership with the City of Pickering, the team launched the Frenchman's Bay Harbour Entrance Class Environmental Assessment (EA) project in 2008. This project will continue with public consultation and input into the refinement of preferred alternatives to the current navigational channel. The EA will be completed and submitted to the Ministry of the Environment for approval in fall 2009.

### Other partnerships and community liaison

The waterfront team continued to work with citizens in the Lake Ontario watershed community through the Lakeshore Grounds Coordinating Committee, Tommy Thompson Park Advisory Committee, Port Union Working Implementation Committee and Friends of Samuel Smith Park.

It met with the Waterfront Regeneration Trust in the fall to discuss opportunities to complete "gaps" of the Waterfront Trail in the Scarborough area. As a result, the Waterfront Regeneration Trust will seek funding support to pursue a trail alignment along the top of the Scarborough Bluffs.

## Etobicoke and Mimico Creeks Watersheds

### Watershed Plan implementation; Etobicoke and Mimico Creeks Watersheds Coalition

The 37 member Etobicoke and Mimico Creeks Watersheds Coalition completed another successful year with over 9,540 volunteers and community residents participating in 57 projects and events across Etobicoke and Mimico watersheds. Approximately 32,000 trees and shrubs were planted to restore 18,080 square metres.

Two new community actions area groups started local action in South Etobicoke Creek watershed and Etobicoke Headwaters Area in Caledon. Existing groups in Heart Lake, Malton and South Mimico successfully implemented projects such as Tom Riley Park Planting — a community event with over 300 people in attendance with support from Trees Ontario Foundation.

### Pearson Eco-Business Zone launched — Partners in Project Green aims to transform Canada's largest employment area

Sustainable business practices are becoming a competitive necessity, and businesses can do more for the environment working together rather than apart. The Greater Toronto Airports Authority (GTAA) and TRCA, in partnership with municipal and regional governments, utilities and participating businesses, have embarked on an ambitious undertaking to put these principles into action. The objective is to transform the area around Toronto Pearson International Airport into a world-class eco-business zone. Once in place, the Pearson Eco-Business Zone will be the largest eco-business initiative (in terms of both land mass and employment) in North America.

For more information, see "Greening the Bottom Line" feature story on page 5.

### New and sustaining watershed partnerships

Natural Resource Canada approved \$250,000 toward implementation of Pearson Eco-Business Park Eco-Efficiency Program in the Pearson Eco-Business Zone.

Ministry of Environment approved approximately \$60,000 to undertake Greenhouse Gas Reduction in Pearson Eco-Business Zone.

Federation of Canadian Municipalities supported the development of Eco-Business Zone Strategy.

Greater Toronto Airports Authority continues to commit over two million dollars in financial support to Pearson Eco-Business Zone Project.

With support from Trees Ontario Foundation, Tom Riley Park Planting was a success with over 300 people in attendance.

## HEALTHY RIVERS AND SHORELINES

### Etobicoke and Mimico Creeks Watersheds (continued)

#### Trails

Cities of Toronto, Mississauga and Brampton, together with GTAA and TRCA, confirmed commitment to construct over 10 kilometres of trail linkages in Etobicoke Creek with over two million dollars of investment.

#### Ontario Food Terminal restoration

Building on the naturalization of a 750-metre boulevard with 225 poplar trees in 2007, the Ontario Food Terminal (OFT), the City of Toronto, the University of Toronto and TRCA worked to install a 120-metre bio-swale at the entrance of the Ontario Food Terminal. Construction of the bio-swale involved the removal of the equivalent of 10 asphalt parking spots. When the rain falls at the OFT, it heads toward their newly vegetated bio-swale, allowing the water to be filtered and used for either re-charging groundwater or onsite irrigation.

#### Spill decision support system for the Region of Peel

Work continued on the development of a web-based spill response system for the Region of Peel. This tool will allow staff to determine a spill's destination, or trace where a spill may have originated, utilizing sewer and topography data modelled in a web-based system.

#### Heart Lake Shoreline restored

More than 720 metres of shoreline work was completed to improve aquatic habitat, water quality and to complement the solar powered "lake-lung" that was installed in the lake to monitor and manage algae blooms and help sustain the warm-water fish community.

#### Peel Children's Water Festival

More than 10,000 members of the community and students attended the Water Festival to learn about the importance of water. Lead by the Region of Peel, this annual event was hosted at Heart Lake Conservation Area.

#### Peel students and Scouts/Guides engagement

As part of the Peel Environmental Youth Alliance's Stewardship Day held each spring, TRCA invited five schools to Heart Lake Conservation Area in Brampton. Students were treated to a number of activities, including a nature walk and three planting stations that resulted in 250 shrubs, 400 aquatics and 500 wildflowers being planted. The event was replicated for Maple Leaf Day, held each fall in Brampton. Three hundred fifty students joined TRCA, Brampton and Peel staff at Wexford Park, where they planted 860 trees and shrubs along the Etobicoke Creek. Brampton Scouts and Guides also planted 1,860 trees and shrubs along the Etobicoke Creek in Wexford Park.

#### Business engagement

One hundred thirty Telus staff joined TRCA at the Region of Peel's Integrated Waste Management Facility on Torbram Road to restore a portion of the Mimico Creek. The Telus employees planted 1,350 trees and shrubs in a time of just under one hour, which was no doubt a record.

#### Mimico Headwaters Channel restoration

Phase two was completed with more than two kilometres of Mimico headwaters channel naturalization.

#### Brampton Horticulture Society Awards TRCA

Toronto and Region Conservation Authority was recognized by the Brampton Horticultural Society for its dedication to promoting, preserving and expanding natural spaces in the City of Brampton in 2008. Toronto and Region Conservation Authority was presented with the J.A. Carrol Award at the Brampton Horticultural Society's annual general meeting.

	Etobicoke	Mimico	Peel	Toronto	Brampton	Mississauga	Caledon	Total
Events	19	38	56	1	11	41	4	57
Attendance	8,623	1,400	9,723	300	8,170	1,455	98	10,023
Plantings	14,009	710	14,634	85	12,905	1,325	404	14,719
Restored square metres	17,950	130	17,950	130	13,520	2,030	2,400	18,080





## Humber River

### Near-urban agriculture

Toronto and Region Conservation Authority recognizes that agricultural land is a vital resource, which must be conserved. Progressive environmental stewardship in the farming/agricultural sector is a requirement for TRCA to collectively realize The Living City® vision. A vision for a new form of sustainable near-urban agriculture on TRCA lands includes the use of new crops and innovative and sustainable agricultural production methods — a combination of appropriate technology, Environmental Goods and Services (EG&S), Best Management Practices (BMPs), Community Shared Agriculture (CSA), and community gardens — which may be on a smaller scale the typical agri-food industry approach and do not compromise TRCA's objectives. Examples include terrestrial natural heritage, erosion, flood control or any other objectives.

Sustainable near-urban agriculture complements TRCA's Sustainable Communities mandate by:

- > Managing possible environmental risks of agricultural practices through the implementation of environmental and agricultural stewardship initiatives that reflect the Canada-Ontario Environmental Farm Plan.
- > Promoting social equity and food security in communities by providing opportunities for increased accessibility to fresh, healthy foods.
- > Providing opportunities for community economic development by helping to reduce the number of imports, and by creating jobs and meaningful work for local people.
- > Reducing the Greater Toronto Area's (GTA) ecological footprint by providing locally planted, raised and sold

food, reducing food miles and greenhouse gas emissions related to food transportation and helping to reduce the impacts of climate change.

- > Providing a space for celebrating the cultural diversity of communities by growing a diverse range of crops.
- > Providing a positive influence for adjacent natural heritage.

Some 2008 highlights of TRCA near-urban agriculture initiatives are:

- > Completed Policy and Operational Procedures and Guidelines for Sustainable Near-Urban Agriculture for TRCA lands.
- > Conserved 1,010 acres of TRCA owned farmland as a result of the Sustainable Near-Urban Agriculture Policy.
- > Entered into a multi-year lease with FarmStart for 37 acres at McVean, located at Claireville Conservation Area, City of Brampton, for the establishment of a training farm facility for new farmers.
- > Hired Everdale Organic Farm and Learning Centre to develop a Feasibility Study for a seven-acre urban agriculture project focused on educational programming at the Living City Campus at Kortright.
- > Contributed to the development of the City of Toronto's Urban Food Production Policy Framework Terms of Reference.

### Community action sites — signature projects

Humber Watershed Signature Projects implement a series of regeneration activities within targeted areas of the watershed. The ultimate goal of signature projects is to conduct regeneration activities through outreach, education and stewardship with community groups and NGOs.

## HEALTHY RIVERS AND SHORELINES



Caledon East Boardwalk - before | after

### Humber River (continued)

Signature projects for 2008 included:

- > The Oak Ridges Corridor Park
- > West Humber Valley and Stream Regeneration
- > Woodbridge Expansion Area
- > Caledon East
- > Boyd North
- > Claireville Conservation Area
- > West Humber Valley — Humber Arboretum
- > Bolton Mills Park
- > Eaton Hall

The signature projects resulted in:

- > Naturalization of strategically identified areas to reach targets for habitat gain in the natural heritage system.
- > Over 3,500 trees and shrubs planted by Humber Watershed staff and volunteers.
- > Partnership development with NGOs and community groups through community nature events and planting activities.
- > There were 1,200 participants and volunteers in attendance for planting activities.
- > Environmental monitoring of key natural heritage features and species with community groups.
- > Eight quadrants representing 3,200 square metres were cleared of invasive species removal with Youth At Risk in West Humber.

Restoration activities that have taken place across the Humber watershed in 2008 have achieved the multiple benefits of naturalization in the valley and stream corridor, habitat enhancement, outdoor recreation and education and community stewardship.

The second report card on the health of the Humber River Watershed, titled *Listen to Your River: A Report Card on the Health of the Humber River Watershed* (2007) won the Canadian Institute of Planners Award for Planning Excellence in the category of Environmental Planning.

### Community Program for Stormwater Management

The goal of Community Program for Stormwater Management (CPSWM) is to fund projects which complement the City of Toronto's Wet Weather Flow Master Plan (WWFMP) — to reduce and ultimately eliminate the adverse effects of wet weather flow. When implemented, the Master Plan will make our streams, rivers and waterfront cleaner and healthier.

Nine community groups were funded approximately \$250,000 under CPSWM for undertaking community naturalization, stewardship, and public outreach projects.

The range of projects approved under CPSWM for 2008 include:

- > Deconstruction of impervious surfaces
- > Installation of rainwater harvesting systems
- > Community tree plantings
- > Wetland creation





- > Green roof construction
- > Multicultural educational programming around stormwater management

#### **Humber's Canadian Heritage Rivers System (CHRS) designation**

The Canadian Heritage Rivers designation recognizes the Humber's outstanding human heritage and contribution to the development of Canada. It is a nationally prestigious designation afforded to only 40 rivers in Canada.

Planning is underway for the 10th Anniversary Celebration in September 2009, in Étienne Brûlé Park.

#### **Fourth term of the Humber Watershed Alliance**

The Humber Watershed Alliance continues to assist TRCA with the implementation of *Legacy: A Strategy for a Healthy Humber Watershed*. The goals of the Humber Watershed Alliance are to protect restore and celebrate the Humber River watershed.

In its fourth term, the Humber Watershed Alliance has been assisting the Humber Watershed Management team in the following project areas:

- > Near-Urban Agriculture
- > Bolton/Nashville Resource Management Tract Plan
- > Claireville Conservation Area
- > Heritage

- > Oak Ridges Corridor Park Management Plan (Kettle Lakes Nature Reserve Plan)
- > Planning and Policy

#### **The Shared Path — Toronto Historical Park**

The Toronto Historical Park project is a destination park within the City of Toronto's Lower Humber Valley. It tells the early history of Toronto from First Nations, French and English perspectives through art, multilingual signage highlighting significant cultural heritage features in the valley landscape, story telling circles and the construction of the Dundas Street Pedestrian Bridge. Working in partnership with City of Toronto, Heritage Toronto, and La Société d'histoire de Toronto, TRCA is actively engaged in the development and implementation of this initiative.

Some of the benefits of the Toronto Historical Park project include:

- > Increased public awareness to the cultural heritage significance of the Humber River.
- > Enhancement of natural valley system through restoration, public art and educational signage.
- > Strong partnership development with City staff and NGOs.
- > Allocation of \$150,000 of City funds to the implementation of trail and lighting improvements, as well as heritage signage.
- > Creation and adoption of park policies and draft action plan.

## HEALTHY RIVERS AND SHORELINES

### Don River

#### Don Watershed Regeneration Council

The Don Watershed Regeneration Council (DWRC) continued to assist TRCA in the development and review of the updated watershed plan for the Don and its components, including a report card and concept site selection and plans. The DWRC also provided direction to TRCA with respect to public consultation on the watershed plan during summer 2008.

The purpose of the first public consultation meeting was to seek feedback from participants on the Draft Vision and Principles for the updated Don Watershed Plan and the draft list of priority issues and objectives to address them. Sixty-three participants, representing a variety of interests, attended the meeting.

The Don Watershed Regeneration Council participated in the review and consultation for the draft Don Watershed Fisheries Management Plan.

#### Walk the Don Trail Guides

Walk the Don is a series of self-guided interpretive walks using newly developed trail maps located throughout the watershed in Toronto and York Region. Three self-guided walks were released in 2008 as part of the Walk the Don Trail Guide series — Wilket Creek, Burke Brook and Lower Don. More guides are expected in 2009.

#### On the Don newsletter

The *On the Don* newsletter was revived after a five-year hiatus with the publication of the first quarterly issue in both electronic and paper formats. The newsletter has a new and updated look. It is expected to be released quarterly. Over 1,100 people and/or organizations received the fall edition.

#### Watercourse identification signage

Years of continued advocacy by the DWRC for watercourse identification signs along roadways in the Don watershed paid off in late 2008 with City of Toronto and Town of Markham, support of the project. Signs are expected to begin going up in 2009.

#### Mill Pond Splash

The 10th Mill Pond Splash was held on Sunday, June 1, 2008. Partners included: the Richmond Hill Naturalists, the Town of Richmond Hill, TRCA and DWRC.

This edition of the “splash” featured tree and shrub planting, nature walks, native mammal, reptile, bird-of-prey and fish exhibits and presentations, bird-box building, an organic food market, an “eco-art” show by local artists, plus displays from over two dozen local community groups and municipal government agencies. These covered a range of environmental conservation and awareness topics.

Over 50 organizations were involved in some way with this event, providing insights and information to visitors on water and energy conservation, natural areas and their protection, use of native plants in gardening, vermicomposting, local wildlife and conservation initiatives, and promotion of local, organic foods. One hundred native trees and shrubs were planted.

Financial support was received from TD Friends of the Environment Foundation and Walmart/Evergreen’s Green Grant program.

#### Paddle the Don

This year’s “Paddle the Don” was held on Sunday, May 6, 2008. It marked the 15th anniversary of the event. Partners included: The Conservation Foundation of Greater Toronto (CFGF), the Wilderness Canoe Association and DWRC. The event was supported by the City of Toronto. Banrock Station got the 15th anniversary of Paddle the Don off to a great start with a generous three-year donation.

The event saw over 170 canoes and kayaks travel down the Don, and 135 staff and volunteers from TRCA, DWRC, Wilderness Canoe Association and 14th Willowdale Scouts assisted them along the way. Among the paddlers were 20 teams representing 16 companies from across the GTA paddling in support of Paddle the Don’s Banrock Station Corporate Canoe Challenge.

Over \$40,000 was raised through fundraising efforts of individual paddlers and corporations, and will support regeneration efforts in the Don watershed. Terrapex Environmental Limited raised the most donations of all the corporate competitors with over \$6,000 in pledges and donations, and was awarded the Banrock Station Corporate Challenge winner.

Media coverage included a front page article profiling the Don River in the Toronto Star, coverage on CTV, CITY TV, AM 640, The Weather Network, Toronto Sun and the North York Mirror.





Paddle of the Don

### **Don Mouth Naturalization and Port Lands Flood Protection Project EA**

Significant progress was made on Don Mouth Naturalization and Port Lands Flood Protection Project EA in conjunction with Waterfront Toronto's Lower Don Lands Master Servicing EA and Framework Plans.

### **Lower Don River West Remedial Flood Protection Project Class EA**

With the support of TRCA and Waterfront Toronto, Ontario Realty Corporation has made significant progress on the construction of the Flood Protection Landform in the West Don Lands, as part of the implementation of the Lower Don River West Remedial Flood Protection Project Class EA.

## **Rouge River and Rouge Park**

### **Natural Heritage Actions**

The 2008 Natural Heritage Actions for the 21st Century Plan answers two major questions: what types of habitats should be created in the Park, and how should the restoration initiatives be prioritized? Working with TRCA and the Friends of the Greenbelt Foundation, Rouge Park was able to establish an approach that finds balance between healthy Park habitats and appropriate visitor use. The Action Plan has formed a set of guidelines to shape the restoration efforts in years to come.

### **Heritage Appreciation and Visitor Experience**

The Heritage Appreciation and Visitor Experience (HAVE) Plan is an exciting new initiative that guides as Rouge Park introduces a visitor-focused model for its enhancement. It is a suite of programs, activities and services that can assist Rouge Park and its partners and stakeholders in achieving the Park's mission, vision and goals.

The Heritage Appreciation and Visitor Experience consists of education and interpretation programs delivered by professional educators, plus signs, brochures, booklets, and websites that inform and orient Rouge Park users. It provides visitors and supporters with opportunities to explore, understand, appreciate, and participate in the stewardship of its natural and cultural heritage. Many of its initiatives enhance public awareness of our relationship to and dependence upon the natural world, and our connections with the past.

### **New habitat**

An old drainage ditch, visible with aerial photography, told the tale of past efforts to drain a marsh for agriculture near Old Finch Avenue and Reesor Road. Despite these efforts, the land continued to flood, aquatic plants would sprout, and waterfowl would occasionally visit.

Over the past year, Rouge Park, assisted by TRCA and Friends of the Rouge watershed, worked to give the marsh another chance. Each group offered its specialized skills, surveying the site, examining soils, planting vegetation, and installing a new dam which resulted in the revitalization of the marsh. As work progressed on the site, herons, ducks and wild turkeys were often spotted, perhaps curious about the new habitat unfolding before them.

### **New Chair**

In February 2008, Alan Wells was appointed by the Ontario government as Chair of the Rouge Park Alliance, Rouge Park's board of directors. Prior to joining the Alliance, Alan worked with the Province of Ontario as a Development Facilitator, helping groups resolve issues concerning growth

## HEALTHY RIVERS AND SHORELINES

### Rouge River and Rouge Park (continued)

management, infrastructure planning and environmental protection. He has over 25 years experience working with York Region, serving as CAO for seven years. Alan has been a volunteer with the Uxbridge Watershed Advisory Committee and TRCA's Duffins and Carruthers Creeks Watersheds Resource Technical Advisory Committee. He is a member of the boards of directors of the Oak Ridges Trail Association and the Oak Ridges Moraine Land Trust.

#### Volunteer activities

Over 70 volunteers helped tidy up over 3,500 pounds of litter in Rouge Park. Participants cleaned up during three separate events in fall 2008 — Rouge Beach and Marsh, the Finch Meander Area, and along Littles Road in Toronto.

#### Annual General Meeting

Rouge Park held their first ever Annual General Meeting, in which Ron Christie was honoured. He is a former Alliance Chair and was awarded with the Rouge Park Award for his efforts in guiding and growing the Park.

#### More than 5,000 birds spotted during bird count

Dozens of volunteers participated in Rouge Park's 5th Annual Winter Bird Count. Keen observers were able to spot over 5,000 birds from 58 different species, including owls, wild turkeys and a variety of hawks. Also seen were birds that typically migrate, such as robins, bluebirds and red-winged blackbirds.

### Duffins and Carruthers Creeks and Petticoat Creek

#### Petticoat Creek Watershed Plan

Through partnerships with the Town of Markham, the City of Pickering and the York-Durham Sewer System, TRCA has secured \$35,000 to undertake the plan development. This plan is being developed in partnership with Rouge Park staff. The action plan will identify required environmental studies, critical watershed issues and will set the stage for the progressive management of the Petticoat Creek watershed.

#### Atlantic Salmon re-introduction

Duffins Creek is one of three creeks selected for the release of salmon fry as part of the Ontario Atlantic Salmon Restoration program. The Atlantic Salmon Restoration program began in 2006 as a partnership between Ontario Federation of Anglers and Hunters, LCBO, Banrock Station Wines, Ontario Sportsfishing Industry Association, Ministry of Natural Resources and TRCA. The goal of the program is to re-establish a sustainable Atlantic Salmon population to Lake Ontario by restoring creek habitat and releasing young salmon (fry) directly into the creek.

To date, over 100,000 fry have been released into the Duffins Creek watershed. Key accomplishments in 2008 included the release of 27,000 fry with grade six students, the restoration of 80 metres of eroded shoreline in Greenwood Conservation Area, and the return of adult salmon.

#### Living Classroom partnership

The Living Classroom partnership was launched in 2008 to work collaboratively towards the development of a Living Classroom to support the on-going restoration of the former Timbers Brothers gravel pit in south Uxbridge Township. The partnership includes Uxbridge Township, Durham Conservation Association, local aggregate operators, Ministry of Natural Resources, and reclamation consultants. The Living Classroom approach provides opportunities to involve the broader community in an adaptive, experience-based restoration process by educating the public through interpretive signage and public forums, and the sharing of both the successes and failures of specific restoration techniques.

A Steering Committee has been established, which will serve as the core decision-making mechanism for the Living Classroom program. A number of short-term actions have been identified for implementation in 2009. In addition, a long-term site enhancement plan has been developed with phase one implementation planned for 2009.

#### Collaborative studies on Ajax-Pickering waterfront water quality

This joint study with York and Durham Regions, Town of Ajax, Ontario Ministry of Environment, Ontario Power Generation and the University of Waterloo is examining factors influencing water quality in the nearshore areas.

Findings from this multi year study will assist all parties in developing and undertaking best management practices that can improve water quality.

### **Lake Ontario Source Water Protection**

In order to ensure safe drinking water supplies, efforts are underway to ascertain the factors influencing municipal drinking water intakes in the nearshore areas of Western Lake Ontario. This is an example of a cooperative study, involving multi-levels of government working together to better understand interactions in the nearshore and adjacent land use.

### **Ajax-Pickering Board of Trade Eco-Business Program**

The Ajax-Pickering Board of Trade Environmental Task Force initiated an Eco-Business program in 2008. The goal of the program is to engage member businesses in sustainable practices. The first initiative of the Eco-Business program is an Eco-Business checklist. The goal of the checklist is to engage new businesses in sustainability and showcase those that have already made changes. Two businesses have already completed the checklist.

### **Lake Ontario Biodiversity Strategy**

Toronto and Region Conservation Authority staff have been supporting Conservation Ontario in a bi-national study of Lake Ontario. This study being led by Nature Conservancy Canada and the US Nature Conservancy is identifying steps that can be taken to restore the biodiversity functions of the lake. A critical aspect of this study is the role that watersheds play in the biodiversity functions of the lake, including water quality, coastal land areas, tributaries and aquatic habitat.

### **Equestrian Stewardship Program**

A pilot equestrian stewardship program was launched in 2008 with two workshops. These workshops included equine experts and a focus group session. The focus group results showed strong support for a stewardship program with focus on pasture management and trail use. Funding was secured to develop and implement a program for 2009.

### **Urban forest studies in Ajax and Pickering**

Urban forests are a key approach to addressing sustainability objectives related to storm water, air quality

and climate change. Toronto and Region Conservation Authority is working with partner municipalities to develop urban forest studies.

Ajax completed an urban forest study in partnership with TRCA. Pickering will be working with TRCA in 2009 to develop an urban forest study. This effort will result in an urban forest strategy for a major developing site in Durham Region.

## **Highland Creek**

### **Highland Creek Stewardship project**

2008 saw the completion of a three-year Ontario Trillium Foundation funded Highland Creek Community Stewardship project. The success of this project was based on the dedication of the collaborative partners, including the Friends of Highland Creek, the Scarborough Arts Council, Centennial Community and Recreation Association and the City of Toronto. A TRCA stewardship staff member facilitated the deliverables and project reporting on behalf of the team members.

Final-year stewardship accomplishments included: hosting seven community events including guided hikes, tree tour, bike tour and the community Winterfest. Over 6,000 people attended these events. There were 39 presentations and workshops covering topics on wood carving, organic lawn care, nature photography and bird box building. A total of 650 community members attended these workshops. Three screech owl nesting boxes were built and installed in the watershed.

Toronto and Region Conservation Authority and Toronto Water partnered with Centennial College volunteers to plant 1,146 trees and shrubs at Morningside Park. More than 400 Centennial College Environmental Student Society volunteers participated in two events (spring and fall).

L'Amoreaux Park and Birkdale Ravine were also sites for community planting events. In 2008, a total of 3,000 native trees, shrubs, wildflowers and aquatic plants were planted in the Highland Creek watershed.



## HEALTHY RIVERS AND SHORELINES

# WATERSHED PLANNING and MANAGEMENT

## Water Management Guidelines

The *Low Impact Development Stormwater Management Manual (LID SWM Manual)* has been developed by Credit Valley Conservation (CVC) and TRCA as a tool to help developers, consultants, municipalities and landowners understand and implement sustainable storm water planning and practices in the CVC and TRCA watersheds. The *LID SWM Manual* provides information and direction to assist engineers, ecologists and planners in landscape-based storm water management planning and in the selection, design, construction and monitoring of sustainable storm water management practices such as green roofs and permeable pavement.

In addition to the launch of the LID Manual, in 2008, TRCA hosted three workshops on Innovative Stormwater Management and modelling. Collectively, these events were attended by over 450 people and brought together experts and practitioners from across Canada to discuss a variety of storm water management initiatives and move sustainable storm water management into the mainstream.

## Watershed Monitoring and Reporting

In spring 2008, TRCA and the Ministry of the Environment entered into a partnership to introduce and promote an Algae Biomonitoring Assessment Protocol under the Regional Watershed Monitoring Program. Under this partnership, an assessment introduced a new field sampling protocol to TRCA, other conservation authorities and interested parties.

## Rouge Watershed Plan and Humber Watershed Plan

Completion of the Rouge and Humber Watershed plans assisted the Regions of York and Peel and their lower tier municipalities in fulfilling legislative requirements of the Oak Ridges Moraine Conservation Plan. The plans provide timely input to ongoing municipal urban growth planning studies, in response to the Provincial Growth Plan, and help to

ensure that TRCA and municipal sustainability objectives are realized at regional and local community planning scales. The Rouge watershed plan provides a watershed context for implementation of Rouge Park plans and programs.

Authority approval of the plans and supporting documents, including an Implementation Guide, was received in 2008.

## Improving the Practice of Erosion and Sediment Control

While significant progress has been made in Erosion and Sediment Control (ESC) practice over the past several years, levels of sediment discharged from construction sites are still above thresholds required for habitat protection. Recent monitoring studies and industry feedback have shown that improving ESC practice will require that TRCA not only help to expand industry knowledge of what ESC practices are most effective, but also provide tools and training on best practices.

Moving towards improved erosion and sediment control on construction sites requires collaboration among several stakeholder groups, including the development and construction industries, product suppliers, conservation authorities, and all levels of government.

In 2008, TRCA worked to improve the knowledge and practice of erosion and sediment control in partnership with:

- > **Certified Erosion Control** — in the development of a web-based inspection tool.
- > **Fisheries and Oceans Canada** — to develop guidance documents and training courses.
- > **The City of Vaughan** — to evaluate the various structural and non-structural elements of ESC practice, ultimately using results to shed light on how municipal ESC policies may be strengthened.

Released in August 2008, the *Erosion and Sediment Control Inspection Guide* serves as a quick reference booklet to aid environmental inspectors in their day-to-day work. The guide was developed for use within all the Greater Golden Horseshoe Area (GGHA) Conservation Authority jurisdictions, and has already been used as part of a workshop training package by Hamilton and Halton. It will also form the basis of future training courses.

## 2008 RWMP Monitoring Activities by Watershed

		Etobicoke	Mimico	Humber	Don	Highland	Rouge	Petticoat	Duffins	Carruthers	Other <sup>1</sup>	Total
Regional Watershed Monitoring Program	Fish Species & Aquatic Habitat	6	7	10	24	12	6	2	8	0	3	78
	Algae Biomonitoring	2	2	4	3	1	6	0	2	0	0	20
	Benthic Invertebrates	19	10	46	24	11	36	4	21	3	4	178
	Fluvial Geomorphology	0	0	5	17	7	26	0	0	0	0	55
	West Nile Virus Monitoring	3	0	15	4	2	3	1	7	2	7	44
	Surface Water Quality	3	2	11	5	1	7	0	6	1	0	36
	Baseflow	9	2	14	7	0	7	2	8	3	5	57
	Stream Flow	2	1	5	8	1	3	1	7	1	2	31
	Precipitation	4	0	11	5	2	4	1	4	1	0	32
	Snow	1	0	4	1	0	2	0	2	0	0	10
	Groundwater Quality & Quantity	2	0	9	1	0	3	0	6	0	0	21
	Terrestrial Natural Heritage <sup>2</sup>	16	0	1,026	49	0	240	0	898	0	120	2,349
	Terrestrial Volunteer Monitoring	5	1	19	6	3	7	1	7	1	4	54
	Climate Change	0	0	3	1	0	1	0	1	0	0	6
	Water Temperature	3	5	2	23	11	0	4	0	0	4	52

**Note:** Above numbers represent the number of stations monitored.

<sup>1</sup> Other minor watersheds including Frenchman's Bay

<sup>2</sup> Italicized numbers are the number of hectares monitored

## 2008 RWMP Monitoring Activities by Region

		Durham	Peel	Toronto	York	Other <sup>1</sup>	Total
Regional Watershed Monitoring Program	Fish Species & Aquatic Habitat	13	13	38	14	0	78
	Algae	2	3	9	6	0	20
	Benthic Invertebrates	31	39	55	51	2	178
	Fluvial Geomorphology	0	1	25	29	0	55
	West Nile Virus Monitoring	10	11	10	13	0	44
	Surface Water Quality	7	5	13	11	0	36
	Baseflow	17	15	13	12	0	57
	Stream Flow	11	5	11	4	0	31
	Precipitation	5	9	9	9	0	32
	Snow	2	3	1	4	0	10
	Groundwater	6	7	2	6	0	21
	Terrestrial Natural Heritage <sup>2</sup>	1,008	542	10	790	0	2,349
	Terrestrial Volunteer Monitoring	10	14	17	12	1	54
	Climate Change	1	1	1	3	0	6
	Water Temperature	7	5	28	12	0	52

**Note:** Above numbers represent the number of stations monitored.

<sup>1</sup> Dufferin/Simcoe

<sup>2</sup> Italicized numbers are the number of hectares monitored

## HEALTHY RIVERS AND SHORELINES

### Improving the Practice of Erosion and Sediment Control (continued)

The underlying theme with the projects mentioned below is the shift from traditional erosion control measures to incorporating bioengineered elements such as native plants in the final treatment, providing sustainable, long-term protection as well as enhanced terrestrial and aquatic habitat features.

#### CA Capital Program for Dam, Flood and Erosion Control Infrastructure Repairs and Studies (WECI)

- > Provides matching funding (50 per cent) to implement high-priority repairs and studies to TRCA's aging flood and erosion control infrastructure.
- > Received \$1.4 million in funding since 2003 (\$311,000 in 2008).
- > OMS manual updates and more than 20 safety and mechanical repairs completed for several large TRCA dams to date.
- > Eighteen erosion control sites repaired to date (two large scale projects in 2008).

#### Erosion Control Monitoring and Maintenance Program

- > This program consists of monitoring more than 300 erosion control structures annually across four regions to identify and remediate high-priority erosion sites.
- > Funding for erosion control works increased more than 300 per cent between 2007 and 2008 (from \$200,000 to \$610,000).
- > Long-term protection of public safety, municipal infrastructure and valuable greenspace.
- > Monitoring of TRCA's jurisdiction in Peel Region expanded significantly.
- > Five large-scale erosion control projects completed in 2008 in Peel Region.

#### Bluff Erosion Monitoring Program

- > Annual monitoring of crest recession along hundreds of private properties along Scarborough Bluffs.
- > Allows TRCA to identify long-term trends in bluff erosion.
- > Provides data for public inquiries, research studies and internal staff (regarding permit applications).

#### Mimico Linear Waterfront Park (Waterfront Toronto Project)

- > Phase one completion celebrated with park opening on July 28, 2008.

- > Creation of public access along the shoreline, new park amenities for local community, terrestrial and aquatic habitat.

#### Port Union Waterfront Park (Waterfront Toronto Project)

- > Over 350 metres of shoreline protection, two headlands, two beaches constructed.
- > Creation of public access along the shoreline, new park amenities for local community, terrestrial and aquatic habitat.

In an effort to promote staff awareness and training on installing bioengineered erosion control structures, Restoration Services retained a world renowned expert in bioengineering (John McCullah of Salix Applied Earthcare, California) to assist with the completion of the Atwood Place Erosion Control Project in April 2008. More than 20 staff participated in the event, allowing a two week phase of work to be completed in just two days.

Restoration Services staff are proud of the progress made in 2008 in evolving from traditional erosion control (rock armouring) to more sustainable, aesthetically diverse treatments.

The most important partnership with erosion control work is the funding program with the Ministry of Natural Resources (CA Capital Program for Dam, Flood and Erosion Control Infrastructure Repairs and Studies) as it allows a greater number of projects to be completed than can be accomplished with municipal and regional funding alone. 2008 marks the sixth successful year of this partnership; and the seventh year has just been announced.

## SOURCE WATER PROTECTION

### Drinking Water Source Protection

In partnership with the Province of Ontario, conservation authorities have been tasked with supporting municipalities in implementing the *Clean Water Act, 2006*. This work begins with assisting Source Protection Committees in developing local source protection plans that will ensure our municipal drinking water sources are clean, healthy and protected for future generations.





Pickering-Ajax flood control dyke  
before | after



The CTC Source Protection Committee is responsible for developing these source protection plans, and the necessary scientific work which will inform them. The CTC Source Protection Region is comprised of the Credit Valley Conservation (CVC), TRCA and Central Lake Ontario Conservation (CLOCA) Source Protection Areas. The Toronto and Region Source Protection Authority (TRSPA) plays a lead administrative role in the supporting this committee, which is equally comprised of local representatives from the municipal, economic and public sectors.

The TRSPA assisted the CTC Source Protection Committee in developing and submitting Terms of Reference to the Ministry of the Environment (MOE) for approval on December 22, 2008. These Terms of Reference will serve as the road map for the development of source protection plans to be submitted to the MOE in August 2012.

Good source protection planning depends on the completion of thorough scientific studies which examine water stresses and threats within the region. This work is well underway and will be submitted to the MOE as part of the Assessment Reports, expected in early 2010.

The studies will include:

- > **Watershed characterization** — a comprehensive description of the local watershed including natural characteristics, population distribution and land use.
- > **Water budgets** — an examination of the amount of water in the watershed and the sustainability of groundwater sources.

- > **Groundwater & surface water vulnerability analysis** — a study of the vulnerability of drinking water sources to potential threats.
- > **Water quality threat assessment** — an identification of specific threats which could affect the quality of water in vulnerable areas.

## Ontario Drinking Water Stewardship Program

The *Clean Water Act, 2006* has created a funding program to assist farmers, landowners and small businesses take action to reduce threats to municipal drinking water sources.

In the CTC source protection region, over \$253,000 has been made available for the sole purpose of reimbursing landowners near municipal wells who complete an Early Action project, including:

- > Septic system upgrade or repair or connection to a municipal service
- > Well decommissioning or upgrading
- > Run off and erosion protection
- > Pollution prevention reviews

In 2007 and 2008, TRCA in partnership with CVC, conducted 295 site visits and hosted a community workshop with the sole purpose of educating landowners about the Clean Water Act and the available funding.

## HEALTHY RIVERS AND SHORELINES

# FLOOD MANAGEMENT

## Flood Control Infrastructure Program

In addition to the two large dams that are operated by TRCA — one in the Don River watershed (G. Ross Lord Dam) and the other in the Humber River watershed (Claireville Dam) — there are eight smaller dams and twenty-three flood control structures across the jurisdiction that are owned and operated by TRCA.

Annual inspections are completed every year to ensure these structures continue to function and provide flood protection. A Flood Control database was developed in 2008 that includes a final list of flood control channels, field inventory forms and inspection reports that are used for the prioritization of repairs.

The following flood infrastructure projects were completed in 2008:

- > A major erosion scar on the Pickering/Ajax Flood Control Dyke was repaired.
- > The Black Creek Flood Control channel was cleaned out and any vegetation and debris from Scarlett Road to Alliance Avenue was removed.
- > Damaged concrete slabs were replaced at Lambton Golf Course and any graffiti along the concrete channel was also removed.
- > Operation maintenance, surveillance and safety manuals for Claireville and G. Ross Dams were completed. Vegetation removal at all of the large dams was completed.
- > An inspection report for Secord Dam was completed that outlines the need for repair of the collapsing overflow culvert located at the site.

## Hydrometrics

Toronto and Region Conservation Authority's Hydrometrics Network provides the foundation of TRCA's Flood Warning System. It is also designed to collect valuable meteorological and stream data that is used by TRCA staff, municipalities and developers to make informed decisions on planning, development, sustainability and environmental protection in TRCA jurisdiction.

Toronto and Region Conservation Authority has developed one of the most sophisticated and robust hydrometric



Gauging site at Finch and HWY 427

networks in Ontario. It operates and maintains a hydrometrics network consisting of climate and stream flow (low and high flow) monitoring stations. As part of the hydrometrics network, TRCA has built a **real-time gauging network** consisting of 17 real-time web-based gauging stations that alert Flood Duty officers of water levels in rivers adjacent flood vulnerable areas within TRCA jurisdiction.

The real-time (RT) web based gauging network allows TRCA flood warning staff to monitor water levels and precipitation amounts instantly. In 2008, RT stream gauges were installed on Taylor Massey Creek and Krosno Creek and RT precipitation gauges were installed at Laidlaw Bus Depot, G. Ross Lord dam and Albion Hills Conservation Area. Enhancements including public access were made to TRCA's RT flood warning website. Since its activation, over 3,600 people have visited the website from over 29 countries.

Monitoring, maintenance and data collection of 32 stream gauges was completed in 2008. In addition to four season precipitation gauges capable of measuring snowfall, TRCA continued to conduct snow course measurements at 10 stations in 2008.



Claireville Dam

Three monitoring stations were installed in the spring of 2008 at Downsview Park, Seneca College King Campus, and Kortright Centre for Conservation. Monitored parameters include: rainfall, wind direction and speed, air and soil temperature, relative humidity, solar radiation, snow depth, barometric pressure, soil moisture, evaporation, evapotranspiration (ET) and leaf wetness. Two automated evaporation pan systems were installed in the spring of 2008 at Glen Haffy Conservation Area and Kortright Centre for Conservation.

## Flood Warning Program — Daily Operations

The flood forecasting and warning system operates 24 hours a day, seven days a week and serves to give timely and accurate information to TRCA's municipal partners about the potential for flooding. 2008 proved to be a great test for the flood forecasting and warning procedures that were implemented in 2007. With record breaking rainfall over the summer months, flood duty officers were busy monitoring water levels in the rivers and streams across the jurisdiction. More than twice the amounts of messages were issued in 2008 compared to 2007 (18 Bulletins, four Advisories and one Flood Warning).

## Flood plain Management

The management of flood risk areas, in order to minimize the risk to life and property, is one of TRCA's core mandates. One way this is achieved is to restrict development within the floodplain. The Flood Plain Management Program maintains current hydrologic, hydraulic and mapped information for use by TRCA and others, and to incorporate improved technologies as they become available.

The Flood Protection and Remedial Capital Works Strategy was well underway in 2008 with the development of software to assist in ranking priority sites. Once completed (in 2009), the Strategy will be used to implement remedial works that will result in reduced risks, due to flooding at many sites across the jurisdiction.

The Water Management Group has been undertaking a flood plain management work plan which identifies watershed specific requirements for mapping updates. During 2008, work continued on updates for the Etobicoke Creek and Mimico Creek watersheds.



## Greening the GTA

*“The acquisition of greenspace also creates other opportunities that go beyond land conservation...”*

Imagine a city with no greenspace. Without greenspace there are no parks for picnics and no trails to hike on. The city would become silent, as birds and other wildlife that depend on greenspace no longer have a home, and children will no longer go outside to play.

Greenspace is a critical part of the green economy. It is a precious commodity that depends on responsible stewardship to avoid further depletion of its resources. As the environmental custodian of the lands in the Greater Toronto Area, TRCA is committed to conserve, restore, develop and manage natural resources. One of the ways TRCA meets this mandate is through the Greenlands Acquisition Project (GAP). To date, more than 16,000 hectares of land have been acquired.

Greenlands Acquisition Project is also meant to ease the effects of the environmental pressures caused by a growing population. There are more than three million residents in the GTA and between 2006 and 2031, the population of the City of Toronto, the Regions of Peel and York is expected to grow by additional 1.2 million people.

Over the past 20 years, the rate of greenspace acquisition has been declining relative to population growth. Greenland Acquisition Project hopes to reverse this trend to ensure that greenspace continues to be a part of the city's natural heritage system. It not only provides recreational spaces for people to enjoy but is critical to the city's health. It removes carbon from the atmosphere, cleans the air, protects our water and provides homes to birds and other wildlife.

In October 2008, TRCA celebrated the acquisition of 50 acres of critical greenspace known as Swan Lake that contains mature upland forest, significant wetland and bog complexes and an undisturbed kettle lake which connects with other publicly held properties, including TRCA's Lake St. George Field Centre.

The property is located within the Oak Ridges Moraine, one of Ontario's most complex and largest glacial remnants, and a main source of the GTA's drinking water. It is part of the Jefferson Forest Environmentally Sensitive Area and is a critical ecosystem that is home to the headwaters of the Humber River and Rouge River. The purchase represents one of the most ecologically valuable acquisitions of private property by TRCA and adds to the more than 1,800 acres of connected greenspace owned by the province and TRCA in the Town of Richmond Hill.

The Region of York, Town of Richmond Hill, City of Toronto, Oak Ridges Moraine Foundation, Ducks Unlimited Canada and The EJLB Foundation all provided funding to TRCA, to protect the vital features and functions of this property that the Ontario Ministry of Natural Resources designated as a provincially significant Area of Natural and Scientific Interest (ANSI).

The acquisition of greenspace also creates other opportunities that go beyond land conservation and touches on issues such as sustainable living, climate change, human health and the opportunity to educate youth to care for the land.







# REGIONAL BIODIVERSITY

Caption

## CONSERVATION LANDS

### Peel Region Land Care Model

The Peel Land Care program correlates with broader corporate directives through the environmental principles of respect, protect, and regenerate.

The program is comprised of a Land Management Strategy to guide future land use practices; baseline inventory and annual audits of conservation lands in Peel Region, and a new database to house the data collected in the field.

Although in its infancy, the Land Care Program has seen many outcomes and benefits to date including:

- > Identification of encroachments in the Claireville CA and Bolton RMT
- > The removal of two potentially hazardous unauthorized structures
- > More collaboration opportunities between TRCA and Peel Region

- > More detailed GIS layers
- > Improved health of conservation lands
- > Increased public safety on conservation lands
- > Increased community engagement and stewardship
- > Enhanced proficiencies and proactive management of conservation lands
- > Improved communication between departments

### Altona Forest Wetland Enhancement

Surrounded by urban development, Altona Forest has been heavily affected for years. Toronto and Region Conservation Authority has worked to protect and restore the forest. Wetland creation and enhancement is necessary to restore the hydrology and ensure the health of the ecosystem.

In partnership with Altona Forest Stewardship Committee, the Toronto Zoo, TD Friends of the Environment, and Ontario Power Generation, the following enhancements took place in 2008:

- > Over 500-square metre wetland was enhanced to provide habitat for chorus frog, wood frog, leopard frog, tree frog, green frog and American toad.



- > A 15-metre boardwalk was constructed, and installation of an interpretive sign around a new viewing platform.

The pond opening event was attended by all partners as well as City of Pickering staff, councilors, and local volunteers.

## East Duffins Headwaters — Stewardship and Community Engagement

The East Duffins Headwaters (EDH) lands are perhaps the most naturally significant of TRCA's greenspace holdings. Community engagement is vital to successful management of the property, including the trail system. Creation of a local stewardship committee has helped to engage various user groups and educate users about greenspace protection, stewardship and responsible trail use. The Stewardship Committee has assisted in removal and management of terrestrial invasive vegetation, construction and management of trails, education and outreach, and fundraising. The Committee will also play a key role in developing and reviewing the management plan update.

The Stewardship Committee was initiated in 2008 and work to date includes biological inventories, cultural heritage surveys, and the creation of a Terms of Reference for the project. The EDH properties also include a former gravel pit, which TRCA is working to restore.

## Oak Ridges Corridor Park East (ORCP) — Stewardship and Community Engagement

The ORCP-East lands will be managed as part of the Oak Ridges Corridor Park. Located in a growing urban area, the park is under enormous pressure from public use. A management plan that specifically addresses the rare and sensitive flora and fauna located on the East lands is necessary to ensure protection of the natural systems, while providing appropriate public use opportunities where feasible. Given that the East lands will be surrounded by development in the coming years, engagement of the local community and landowners is vital to successful stewardship of the lands.

## Palgrave Forest and Wildlife Area — Three-Year Trail Plan Implementation Project with 2008 as Year One

Palgrave Forest and Wildlife Area is strategically located so that it can be the trail link and the intersection of two of Southern Ontario's most significant landform features — Niagara Escarpment and the Oak Ridges Moraine. The Bruce Trail, which runs the length of the Niagara Escarpment, has existed on the Palgrave property for a number of years. In 2008, TRCA in partnership with the Oak Ridges Trail Association completed the link to the Bruce Trail on the Palgrave property. This trail proposal is supported by both the Bruce Trail Conservancy and the Oak Ridges Trail Association. In addition, the project supports the public use plans of the approved Humber River Watershed Strategy.

The Oak Ridges Trail extends for a continuous 210 kilometres across the Oak Ridges Moraine. In 2008, TRCA implemented a four-kilometre trail section at the Palgrave Forest and Wildlife Area that completed another step in building this hiking trail across the entire Moraine from west to east. In addition, this work has joined the Oak Ridges and Bruce trails, bridging the natural connection between the Moraine and the Niagara Escarpment.

To acknowledge this significant achievement, TRCA jointly hosted a celebration event in October with the Oak Ridges Trail Association and Ontario Nature. The event also featured a public awareness initiative of Ontario Nature and the Ontario College of Family Physicians on the human health benefits of the Greenbelt.

## Greenlands Acquisition Project

Toronto and Region Conservation Authority acquired 17 properties in 2008, containing 335 acres and three conservation easements containing three acres.

Some of the highlights of these purchases are as follows:

- > The 51 acres Swan Lake Property located in the headwaters of the Rouge and Humber Rivers, in the provincially significant Wilcox Lake and Uplands Area of Natural and Scientific Interest, within the Jefferson Forest Environmentally Significant Area. The property contains a small kettle lake and is designated as Natural Core Area under the Oak Ridges Moraine Conservation Plan.

## REGIONAL BIODIVERSITY



## Greenlands Acquisition Project (continued)

- > The Perryman Property located in the headwaters of the Rouge River, adjacent to Phyllis Rawlinson Park in the Town of Richmond Hill was a partial taking of 81 acres. It contains the provincially designated Rouge River Headwater Wetland Complex and designated as Countryside Area and Natural Linkage Area in the Oak Ridges Moraine Conservation Plan.
- > Cation/Speirs donated 51 acres of land in the headwaters of the Humber River, in the town of Caledon. The subject property is part of a mature forest which is the largest wooded area in the Mayfield West Community Secondary Plan study area.
- > The Ontario Realty Corporation acquisition included 78 acres of valley land located in the Petticoat Creek Watershed.
- > Completion of a land exchange with Pickering Harbour Company in the Frenchman's Bay area of the City of Pickering resolves the fragmented ownership issues on the east split of Frenchman's Bay. The acquisition frees up about 80 per cent of the east spit for public uses.

## NATURAL HERITAGE

### Terrestrial

#### Headwaters

Urban development is expanding northward to the upper reaches of TRCA watersheds. This area is characterized by many small/intermittent and inadequate drainage features. These features together play an important role in the function of the watershed as a whole. Toronto and Region Conservation Authority's challenge is to provide appropriate advice on how to maintain these features or their functions as land uses change. In 2008 research activities continued in headwater streams in the GTA in partnership with University of Waterloo, CVC, Lake Simcoe Region CA and Halton Region CA. Toronto and Region Conservation Authority was fortunate to capture a wet year and the contributions from these streams yielded many samples that TRCA is wading through to identify invertebrate and organic contributions to downstream watercourses and fish habitat. This data is necessary to improve TRCA guideline for the protection of headwater streams and their functions.



### Redside dace research

Toronto and Region Conservation Authority's watersheds contain most of the Ontario and Canadian populations of reddsidedace — a small minnow. They are listed under the new provincial Endangered Species Act. The research TRCA is doing in partnership with the Ministry of Natural Resources (MNR) and University of Toronto (U of T) will inform the "recovery strategy" for this species that is mandated under the provincial Act.

The brightly-striped minnow, reddsidedace, is a Species at Risk within the TRCA jurisdiction. Urban storm water impacts on water quality and quantity, and is the largest threat to this species' remaining habitat. Toronto and Region Conservation Authority Aquatic Group, in collaboration with the U of T and MNR, is undertaking a five-year project to document changes in reddsidedace habitat and populations in response to land development. This project will inform the reddsidedace Recovery Strategy and improve our ability to protect critical habitat. Year two has been completed providing the most comprehensive dataset to-date on reddsidedace habitat use, their home range and, for the first time, video footage of spawning activity.

### Urban forests

Many TRCA municipalities have recognized the importance of their urban forests (including natural areas, street and park trees and residential trees) and are looking to develop urban forest strategies. Urban forests provide cooling effects, carbon sequestration, natural streetscape beauty, and habitats.

In 2008, TRCA coordinated an Urban Forest Project Design forum that succeeded in promoting collaboration between urban forest initiatives across the GTA. Toronto and Region Conservation Authority has been working to promote collaboration and consistency between the municipalities so that the urban forest data collected can be used both locally and regionally, to provide a more comprehensive look at where we stand and how to approach climate change mitigation and adaptation. Data collection on over 700 plots in Peel Region and the Town of Ajax was completed. The analysis of these data will inform the development of municipal Urban Forest Strategies.



## REGIONAL BIODIVERSITY

### Terrestrial (continued)

#### Collection and reporting of long-term data on watershed health and condition

Toronto and Region Conservation Authority's Regional Watershed Monitoring Program (RWMP) focuses on long-term monitoring of aquatic and terrestrial ecosystems at the sub-watershed and watershed scale and across the region as a whole. The program provides the underlying scientific data that informs the key planning and reporting mechanisms of TRCA. It also facilitates the communication of data availability and data sharing both internally and with external agencies. Most components of the monitoring program have completed at least five years of data collection by the end of 2008.

The RWMP, with its established protocols, also provides the ability to implement short-term or special project data collection/monitoring in a timely manner in response to needs identified by TRCA or its partners. The long-term annual data provides baseline data in support of "before and after" analysis related to ecosystem and infrastructure impacting events.

#### Technical training

Toronto and Region Conservation Authority is dedicated to providing quality technical training opportunities in order to facilitate knowledge transfer to partners and peers, and to help further the accuracy and standardization of data collected in watersheds. Training opportunities in a variety of watershed planning, monitoring, best management practices and sustainable technologies were offered in 2008. Toronto and Region Conservation Authority held training in the following areas: Backpack Electrofishing Certification, Ontario Stream Assessment Protocol (OSAP) certification, and West Nile Virus larval mosquito identification.

## AQUATIC

### Aquatic Habitat Toronto

Aquatic Habitat Toronto is a consensus based partnership between agencies for the improvement of aquatic habitat on the Toronto waterfront. Partners include Fisheries and Oceans Canada, Ministry of Natural Resources, City of Toronto, Environment Canada, Waterfront Toronto, with TRCA as the lead agency. Aquatic Habitat Toronto provides

support for proponents working on the waterfront by providing one-stop approvals process for cost and time savings. In 2008, four projects were approved and advice was provided on over 10 waterfront projects. It was integral to the completion of the Spadina Wavedeck.

### Spadina Wavedeck

There were 2,500 square metres of aquatic habitat created to compensate for potential negative impacts of the wavedeck.



Spadina Wavedeck

### Aquatic Habitat Toronto Science Sub-Committee

With the use of scientific, evidence-based approach to achieve a net gain in productive habitats along the Toronto Waterfront, science workshops and standardization of monitoring modules were initiated.

### Urban Aquatic Habitat Symposium at American Fisheries Society Conference

The Urban Aquatic Habitat Symposium was a success with strong attendance, 11 presenters, highly visited display booth, distributed over 700 flash drives of the Toronto Waterfront Aquatic Habitat Restoration Strategy.

### Public Sector Quality Fair

The Public Sector Quality Fair is an annual event showcasing service quality excellence within Ontario in the federal, provincial, municipal and broader public sector.



Upper Mimico Creek  
before | after



Toronto and Region Conservation Authority received the Level three, Award of Excellence for the integrated planning approach to waterfront redevelopment.

## HABITAT RESTORATION

### Greenland Acquisition Project

Toronto and Region Conservation Authority acquired 17 properties in 2008, containing 335 acres and three conservation easements containing three acres. Refer to "Greenland Acquisition Project" details on page 27 for more information.

### Upper Mimico Creek Aquatic Habitat Implementation

Upper Mimico Creek Aquatic Habitat Implementation naturalized a degraded urban watershed, portion of Mimico Creek, enhanced wildlife habitat, improved water quality and helped mitigate flood events.

The purpose of the Upper Mimico Creek Aquatic Habitat Implementation project is to re-naturalize a portion of the highly urbanized Mimico Creek. In 2008, 580 metres of hard engineered structures were removed and replaced with a natural corridor design, three wetlands were constructed, 900 metres of riparian zone was planted and numerous essential habitat structures were created.

### Lake Wilcox Shoreline Restoration Work

Lake Wilcox Shoreline Restoration Work naturalized shoreline (in phases) to improve habitat and water quality, enhanced wildlife habitat and improved recreational and educational opportunities for community.

In partnership with the Town of Richmond Hill, this project is an extension of the shoreline restoration work done here in 2006 along the north shore of the lake.

Before the restoration efforts:	After the restoration efforts:
<ul style="list-style-type: none"> <li>&gt; Bank erosion</li> <li>&gt; No shoreline protection</li> <li>&gt; High public use</li> <li>&gt; Overgrazing of critical vegetation by waterfowl</li> <li>&gt; Lack of habitat for local fish and wildlife</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Over 620 metres of restored shoreline</li> <li>&gt; More than 5,910 plant units including aquatics, emergents, wet meadow shrubs and trees</li> <li>&gt; Over 3,250 square metres of habitat enhancements</li> <li>&gt; Spawning shoals, emergent vegetation and buffer zones, amphibian basking and nesting habitat, weedy pockets and pools, transitional riparian zones improve habitat and water quality, enhance wildlife habitat and improve recreational and educational opportunities for community</li> </ul>

## REGIONAL BIODIVERSITY



Heart Lake  
before | after



### Heart Lake Naturalization

The Heart Lake Naturalization Project goals were to improve habitat and water quality, enhance wildlife habitat and improve recreational and educational opportunities for the community. Shoreline restoration work resulted in 150 metres of naturalized shoreline in 2008.

Before the restoration efforts:	After the restoration efforts:
<ul style="list-style-type: none"> <li>&gt; Gabion baskets lined the banks creating 90 degree vertical banks</li> <li>&gt; A lack of riparian vegetation</li> <li>&gt; Impacted trail system</li> <li>&gt; Lack of fish habitat</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Over 720 metres of renaturalized shoreline throughout the years (150 metres in 2008)</li> <li>&gt; Removal of gabion structures</li> <li>&gt; Fish habitat (log cribs)</li> <li>&gt; Aquatic plantings to enhance riparian zone</li> <li>&gt; A limestone screened trail system</li> </ul>

### Habitat Implementation Plans

Habitat Implementation Plans (HIP) identifies priority restoration projects for implementation and is a mechanism for targeting sites for implementation and achieving

watershed targets. It also helps TRCA achieve the watershed targets set forth in the watershed plans, the terrestrial natural heritage strategy and fish management plans.

#### Summary table of 2008 completed HIP restoration work

Watershed	Wetland (hectares)	Riparian (metres)	Forest (hectares)
Etobicoke-Mimico	0.8	200	0.5
Humber	2.2	250	0.5
Waterfront	2.0	–	0.3
Don	1.0	–	1.5
<b>Total</b>	<b>6.0</b>	<b>450</b>	<b>2.8</b>

### Peel Climate Change Budget

Peel Climate Change Budget mitigates the impacts of climate change so that ecosystems can continue to survive and thrive. It also allows for implementation of wetlands, riparian plantings, reforestation and best management practices.

Six projects dedicated to mitigating the impacts of climate change within the Region of Peel:

- > Centreville Creek Habitat Implementation Plan
- > Claireville Ecosystem Restoration
- > Enhance existing Habitat Implementation Plans in Peel Region



- > Enhance existing Oak Ridges Moraine in Peel Region
- > Riparian Planting in Peel Region
- > Wetland Management in Peel Region

Restoration work completed at these sites includes: riparian plantings, reforestation, wetland creations and enhancements, addition of essential habitat structures, and invasive species management. This will result in the return of indigenous species, less turbidity in the water, cooling and a more beautiful natural environment.

#### Summary table of 2008 Peel Climate Change implemented restoration work (for all six projects)

Work	Wetland (hectares)	Riparian (metres)	Reforestation (hectares)	Number of Trees and Shrubs
Deliverables	55	4100	3.5	27300
Number of Projects	8	5	5.0	10

### Rouge Park Support; Reesor Wetland

There was significant joint effort between TRCA and Rouge Park in naturalizing a large parcel of land, resulting in functioning wetland, improved hydrology and enhanced fauna habitat.

### Bluffers Park Wetland

This project was undertaken to improve water quality entering Lake Ontario. Highlights of the project included: wetland creation, improved water quality, enhanced habitat, creation of trail system, improved recreation opportunities and improved public safety.

### Oak Ridges Moraine CPA2 and CPA11

This project's goals were to improve landowner and TRCA relations and increase natural cover as well as landowner partnerships, increased public awareness, improved wildlife habitat and increased natural cover.

### Greenwood Stream Restoration

Greenwood Stream Restoration project was initiated to control and prevent future stream bank erosion while demonstrating the use of soft engineering structures (instead of hard engineering structures such as gabion stone). This project improved water quality, wildlife habitat and fish habitat.

### Tommy Thompson Park; Cormorant Management Strategy

The strategy addresses a sensitive issue while bringing together stakeholders and partners from across the spectrum. Development and implementation of the Cormorant Management Strategy was initiated in 2008.

Below is the summary of restoration work completed in 2008. Work includes: wetland creations and enhancements, riparian area plantings, reforestation plantings, stream restoration and shoreline restoration.

	Wetland (hectares)	Riparian (metres)	Reforestation (square metres)	Stream Restoration (metres)	Shoreline Restoration (metres)
Deliverables	14.4	5600	14.33	980	900

### Fill Projects

Toronto and Region Conservation Authority was able to re-use fill and topsoil in order to avoid using precious landfill capacity. This occurred in the following locations:

- > Inland Fill Program — Bob Hunter Memorial Park Topsoil Placement — Town of Markham
- > Claireville Phase Three — Hwy 50, City of Brampton
- > Ninth Line and Donald Cousens Parkway — Town of Markham
- > Kleinburg New Forest North — Hwy 27 and Islington Avenue, City of Vaughan

## REGIONAL BIODIVERSITY

### Forest Management

Toronto and Region Conservation Authority is managing our forests in keeping with commitments under the Managed Forest Tax Incentive Program; and to increase Biodiversity, and long-term forest sustainability and health.

In 2008, TRCA completed the thinning and cleanup of 25 hectares of conifer plantation at Albion Hills Conservation Area. Toronto and Region Conservation Authority also completed a thinning operation at the Bolton Duffy tract of approximately 20 hectares.

It has also initiated the Hardwood thinning of a 16.5 hectare parcel at the Glen Major Fiss property, in advance of anticipated Emerald Ash Borer tree related mortality. This project was able to identify several quality Butternut trees, which have been released through the thinning operation.

Toronto and Region Conservation Authority has established a relationship with the Ministry of Natural Resources, and is working collectively to continue the monitoring and sampling the Provinces Permanent Sample Plots. This will provide a better understanding of how various types of forests grow in southern Ontario.

### The Living City® Achievements in 2008

#### Tree and Shrub Planting (all projects) 2008

Planting Goals	Private Land	Authority Land	Municipal Land	Federal/ Provincial Lands	Total Planted ( * )
Reforestation	39,790	101,025	0	78,400	<b>219,215</b>
Conservation Services	27,661	121,926	34,190	4,753	<b>188,530</b>
<b>TOTAL</b>	<b>67,451</b>	<b>222,951</b>	<b>34,190</b>	<b>83,153</b>	<b>407,745</b>

[ \* ] - includes all projects utilizing TRCA Nursery plants

#### Planting by Watershed 2008

Watershed	Shrubs	Trees	Bioengineering/ Aquatics	Reforestation	Total Planted
Etobicoke/ Mimico	11,435	4,260	15,036	0	<b>30,731</b>
Humber	39,425	21,246	9,014	187,089	<b>256,774</b>
Don/Highland	9,772	2,895	13,647	0	<b>26,314</b>
Rouge	6,533	2,774	1,396	14,156	<b>24,859</b>
Duffins	5,475	3,530	0	17,970	<b>26,975</b>
Petticoat/ Frenchman's	391	33	648	0	<b>1,072</b>
Waterfront	2,279	1,183	36,000	0	<b>39,462</b>
<b>TOTALS</b>	<b>75,310</b>	<b>35,921</b>	<b>75,741</b>	<b>219,215</b>	<b>406,187</b>

**Note:** An additional 1,558 plants were supplied to other Greater Toronto Area Conservation Authorities and partnering NGO's for planting within their respective watersheds.



Tommy Thompson Park

## Hazard Tree Programs

Under TRCA Hazard Tree Policy, TRCA must maintain the safety and integrity of its properties for public use.

Mapping and removals are continuing across the watersheds, with approximately 100 kilometres of trails mapped and over 1,000 dangerous tree hazards have been abated.

## Invasive Pest Management

Toronto and Region Conservation Authority is managing our forests to decrease the potentially devastating future expenses associated with the death of tens of thousands of Ash trees. Toronto and Region Conservation Authority is monitoring for other potential problems and is trying to anticipate future requirements.

In 2008, TRCA initiated an updated inventory and mapping for TRCA managed forest properties. Toronto and Region Conservation Authority began to look at areas that might explain infestation and take preventative measures — for example, in advance of the anticipated Emerald Ash Borer infestation.

Toronto and Region Conservation Authority is continuing to monitor for the presence of other invasive species including Sirex Woodwasp, Gypsy Moth, and terrestrial plant species, primarily Dog Strangling Vine, and European Buckthorn.

## Peel Region Climate Change Initiatives

In 2008, TRCA increased landowner contacts and forest management planning and planting services to landowners in Peel. Through new landowners contacts, TRCA is helping to manage over 75 additional hectares of private forest.

Toronto and Region Conservation Authority completed inventory updates on 58 hectares of TRCA forest in Peel Region, at Glen Haffy and the Caledon Tract.

## Tommy Thompson Park Infrastructure Design Project Overview

While adhering to its primary goal of preserving and creating a unique, car-free urban wilderness, Tommy Thompson Park has the potential to better accommodate its users, and to provide a more attractive and inviting experience to the public, as well as provide better understanding and protection of this urban wilderness park.

The infrastructure will be sustainable in design with a minimal footprint that incorporates the natural environment, and promotes “Urban Wilderness.” The spaces will be adaptable with high usability, and low operation and maintenance requirements.

The infrastructure design project is composed of four specific design components:

- > Staff booth and interpretive area
- > Environmental shelter
- > Ecological research station and interpretive area
- > Remote washroom facilities

2008 accomplishments include:

- > More than 1.4 kilometres of riverbank and 600 metres of Lake Ontario shoreline stabilized in 2008
- > Total of 14 bridges protected
- > Three major trail realignments to protect public safety against river erosion
- > Three large-scale dredging projects



## Greening the Building Industry



*“The truly unique feature, and the most significant benefit of this home, lies not in the design or in the technology, but in the nature of the partnership itself.”*

Residential buildings consume approximately one-third of Ontario's energy supply and there was no sign of this decreasing. Many sustainable building technologies existed on the market, but hurdles in the way were slowing down the market transformation of the building industry.

Bringing down those hurdles meant finding a way to inform, educate and motivate people to adopt sustainable building practices in a language they can understand. It also meant bringing the best of green building technologies and design to life to build homes that use less energy, water and natural resources, create less waste, and is healthier and more comfortable for occupants.

"The truly unique feature, and the most significant benefit of this home, lies not in the design or in the technology, but in the nature of the partnership itself," said Larry Brydon of Toronto, LEED® AP with Reliance Home Comfort, an active member of Building Industry and Land Development (BILD) and champion of the Sustainable House project. "TRCA and BILD members are leading the way to educate the public on how they can contribute to a more sustainable environment through an environmentally-friendly house. We've recognized as an industry that we need to build better, greener homes."

For the first time in Toronto, the building industry and TRCA came together for a common purpose — to help create a greener GTA. In summer 2008, more than 1,200 volunteers from TRCA and BILD came together for a three-month build

of the Archetype Sustainable House located at the Living City Campus at Kortright in Vaughan, one of the province's premier environmental and renewable energy education and demonstration centres.

More than 182 sponsors contributed to the project with donations. The actual build itself was green, using a solar-powered trash compactor, solar-powered tools and electricity from "green" supplier Bullfrog Power. The building of this environmentally friendly home pushed the boundaries of conventional construction as builders and trades people had to learn very quickly how to use green products, tools and techniques.

"This building couldn't have been completed without our partnership with BILD, the hundreds of sponsors, and the thousands of volunteers who worked hard to it bring to life; it's a true testament to the importance of working together for a cleaner, healthier urban environment" said Brian Denney, Chief Administrative Officer of TRCA. "The Archetype Sustainable House will not only educate trades, builders, students, and the public about how easy and cost-effective an investment in eco-efficiency can be, it will also inspire GTA residents to live more sustainably."

Plans for workshops and tours for students, general public, corporations and industry trades are being planned for 2009. It is expected that more than 150,000 people will step through the doors to learn and be motivated by the future of green building design.







## Greening Young Minds

Nature Deficit Disorder was first coined by Richard Louv, whose book, *Last Child in the Woods: Saving Our Children from Nature Deficit Disorder*, explores the impact that the disconnect from nature can have on future generations. Urbanization, poverty and lack of funding for youth-oriented nature programs are beginning to impact today's youth. There are many children in the GTA who rarely have the opportunity to experience nature and that's why The Weston Environmental Leaders of Tomorrow Program at Lake St. George is essential.

Toronto and Region Conservation Authority is one of Canada's largest providers of outdoor and experiential education. In early 2008, TRCA and the W. Garfield Weston Foundation partnered together to produce an innovative environmental learning experience for more than 2,000 GTA grade six students. The Foundation committed \$575,000 over a three-year period, to ensure that 60 GTA classes from high-priority neighborhoods would have the opportunity to understand why it is important to be stewards of the environment.



# ECO-INITIATIVES IN THE DINING HALL...



*“Toronto and Region Conservation Authority has a 40 year history in education that reaches learners of all ages...”*

The program was designed to immerse students in a two and a half-day residential program at TRCA's Lake St. George Field Centre, located on a 120 hectare site on the Oak Ridges Moraine in Richmond Hill. The program focused on three pillars including lessons in environmental action, community leadership and ecosystem learning. It also went one step further by developing a positive change in students' behaviours to bring environmental action within their community, home or school.

For many of these students, it meant being up close to nature for the first time—living, learning and playing in their outdoor classroom. Thanks to the generosity of the Weston Foundation, the financial hurdles normally faced by students when it came to program fees, accommodations, bussing and meals were removed.

Toronto and Region Conservation Authority has a 40 year history in education that reaches learners of all ages and this knowledge helped to create a new model in experiential learning called the Weston Model. The Weston Model is a ground-breaking format for environmental field trips that

combine the field centre visits with pre and post trip activities to bring the experience beyond the field centre and to help turn learning into actions.

The Weston Model is so successful in engaging students that it has been adopted at the Albion Hills Field Centre as the Peel Environmental Weeks Program. A true testament to the programs success has been the variety of student-initiated actions performed after their trip. One school developed a letter writing campaign to become the first school in York Region to have a compostable waste pick-up at their school. Another school created a large art installation based on E-Waste which will be on display at the Kortright Centre for Conservation in the summer of 2009 and at the Royal Ontario Museum in the fall of 2009. A TRCA survey also showed that more than 87 per cent of students who participated in the program want their school to participate in the EcoSchools program.

The words of one grade six student summed up why being an environmental leader was crucial, “Smaller the footprint, better the Earth.”

# SUSTAINABLE COMMUNITIES



Archetype Sustainable House

## THE LIVING CITY®

### Climate Change Response

Toronto and Region Conservation Authority created *Meeting the Challenge of Climate Change: Toronto and Region Conservation Authority's (TRCA) Action Plan for The Living City®*. This document is a proactive strategy to address the impacts of climate change within our jurisdiction and provides a business planning framework through the coming decade.

#### Climate change and the watersheds in TRCA's jurisdiction

Toronto and Region Conservation Authority's jurisdiction is influenced by the sheer magnitude of its urban centres. Urban centres rely on municipal infrastructure such as sewage and water treatment facilities, roads, bridges and dams, electricity and communications. The forecasted increase in extreme events, such as storms, flooding and drought, will create additional risk to both these

facilities and their operational function, placing municipal infrastructure at risk and, therefore impact the operation of our urban centres.

Further exacerbating the effects of climate change are urban centres and urban sprawl, which contribute to energy absorption and surface water runoff. This is a result, in large part, of the abundance of paved surfaces. Along with warmer water temperatures, increased surface runoff will impact the physical, chemical and ecological health of the streams, rivers and lakes in TRCA's jurisdiction.

The levels of uncertainty with both Global and Regional climate models, make it difficult to predict how climate change will affect TRCA's jurisdiction.

While most global climate change models predict increases in temperature and variability in precipitation in the southern Ontario region, predictions vary widely between models in terms of both total change and the seasonal distribution of those changes. Further, because of the scale of the global

models, the smallest prediction units are in the range of 100,000 square kilometres, it is not possible to effectively predict climate change effects on a local scale.

To better understand how local climate patterns will be influenced by climate change, TRCA and its partners have

begun to explore techniques to more accurately predict local climate change.

The table below provides potential ground level climate change impacts within TRCA's jurisdiction.

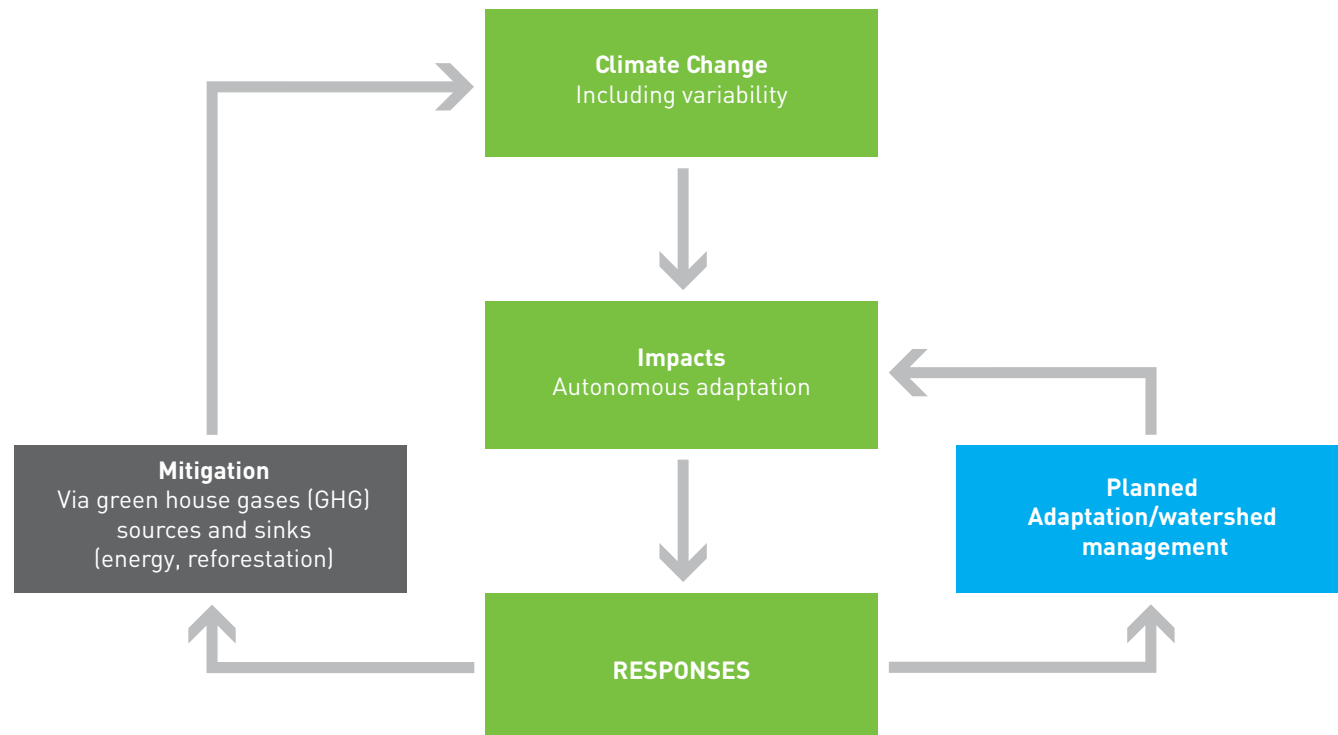
Sector	Impact and system response
Terrestrial ecosystems (including urban forests)	<ul style="list-style-type: none"> <li>&gt; Northward expansion of the Carolinian Zone.</li> <li>&gt; Unable to keep pace with climate change, indigenous woodlots are more likely to become stressed or die out.</li> <li>&gt; Warmer landscapes will increase exotic species and loss of indigenous biodiversity.</li> <li>&gt; Species loss as a result of habitat loss.</li> <li>&gt; Species loss as a result of inability to compete with invasive species.</li> <li>&gt; Proliferation of over-wintering insect pests which will impact agricultural and forestry production.</li> <li>&gt; Plants growing earlier in the spring with earlier germination leaf-out and flowering times.</li> <li>&gt; Unpredictable impacts on wetlands: structure, function, hydrology.</li> </ul>
Water quantity and quality (hydrology)	<ul style="list-style-type: none"> <li>&gt; Annual volumes of precipitation in TRCA's jurisdiction may increase or decrease dramatically.</li> <li>&gt; The ratio of snow to total annual precipitation will likely decrease. There is potential for a shorter snow accumulation period, greater winter runoff and reduced summer flows.</li> <li>&gt; There may be an increase in the frequency and magnitude of storm events, increased surface runoff, as well as erosion and sediment loading in rivers.</li> <li>&gt; Change in the pattern of water supply which will increase pressure on source water resources and impact municipal management.</li> </ul>
Aquatic ecosystems (including coastal eco-systems)	<ul style="list-style-type: none"> <li>&gt; As surface temperatures increase, water temperatures are expected to rise as well. Warmer waters may result in sensitive aquatic species moving upstream to maintain temperature conditions resulting in the loss of coldwater fisheries, for example, trout and salmon; the invasion of non-indigenous species such as common carp and zebra mussels, which will alter fish community.</li> </ul>
Infrastructure	<ul style="list-style-type: none"> <li>&gt; Increased cost of insurance as a result of flooded basements and buildings, and extreme weather (insurance losses multiplied more than 13 times from 1960 to 1999).</li> <li>&gt; Increase in temperature and extreme events may pose a risk to the integrity and longevity of built heritage structures, including roads.</li> </ul>
Energy	<ul style="list-style-type: none"> <li>&gt; Rising energy costs, growing demand for energy, higher peak energy demand due to challenging weather conditions, and aging infrastructure are all challenges Toronto will face in the coming years.</li> <li>&gt; In part, due to increasing demand for summer cooling and decreasing hydroelectric capacity, Ontario's electricity supply will need to be replaced with a combination of new supply/peak demand management and conservation.</li> <li>&gt; In recent years, rising water temperatures in the Great Lakes have impacted electricity generation by reducing the efficiency of cooling systems within nuclear and coal-fired plants.</li> </ul>



## SUSTAINABLE COMMUNITIES

Sector	Impact and system response
Human communities (human health/recreation)	<ul style="list-style-type: none"> <li>&gt; Warmer temperatures lead to greater amounts of smog, breathing problems, higher rates of skin cancer and other diseases.</li> <li>&gt; Extreme weather events may further cause risks to human life and property due to flooding.</li> <li>&gt; Loss of recreation activities due to reduction of baseflow in some lower tributaries of the watersheds.</li> <li>&gt; Loss of swimming days due to beach closures because of bacteria.</li> </ul>
Agriculture	<ul style="list-style-type: none"> <li>&gt; Both positive and negative impacts are expected — longer frost-free periods could extend the growing season and potential for new crop varieties.</li> <li>&gt; Longer frost-free periods support invasion of pests and disease, leading to greater crop losses.</li> <li>&gt; Potential for more local production in the GTA.</li> <li>&gt; Climate variability — severe drought and floods could damage crops.</li> <li>&gt; High temperatures may stress livestock, lowering dairy production and weight gains in beef cattle.</li> </ul>

### Addressing climate change at TRCA (adapted from Environment Canada)



*Meeting the Challenge of Climate Change: Toronto and Region Conservation Authority (TRCA) Action Plan for The Living City®* is a “living” document. Toronto and Region Conservation Authority will aim to revisit it every year to ensure its

effectiveness and progress on implementation of priority actions. Major updates will be undertaken every five years, along with TRCA’s business plan.



## Market Transformation Programs

### Greening Retail

Greening Retail is one of the community transformation projects that bring environmental best practices that retailers are implementing around the world to retailers across Canada. The program finds best practices that are good for the environment and good for the corporate bottom line.

Fifteen national and international retailers agreed to be interviewed by a third-party consultant and research partners at Ryerson University and Stirling University in Scotland. Companies that have been interviewed include, Wal-Mart Canada, IKEA, Carrefour (France), Woolworth (Australia), The Musgrave Group (Ireland), Tesco (UK), Aeon (Japan) and H-E-B (US), to name a few. The results of these case studies will be disseminated through retail associations, universities, and the Greening Retail website ([www.greeningretail.ca](http://www.greeningretail.ca)).

### Renewable Energy Business Case

The purpose of the project is to provide a clear understanding of the business case for specific renewable energy technologies and target audiences. The intent is to help these audiences to find the renewable energy technology that makes the best business sense for them.

Toronto and Region Conservation Authority partnered with the Civil Engineering Faculty at the University of Toronto and an advisory group consisting of representatives from business as well as municipalities. The project looked at general business cases for five target audiences (homeowner, large commercial business, institutional,

small business and investor) and four renewable technologies (photovoltaic, solar air heating, solar water heating, ground source heat pump). The study found that the best business case as for the installation of a ground source heat pump in the construction of a new building for a small business. The internal rate of return (IRR) for this combination was found to be 15 per cent (IRR is a measure of the return you would need to get if you invested your money in other sources). In the next stage of the project TRCA will be working with business to eliminate the barriers to implementing this environmentally and business friendly technology.

### Renewable Energy Road Map

The purpose of this project is to develop an understanding of the most strategic actions that need to be undertaken in Ontario in order to transform the market for renewable energy. In partnership with Professor Jose Etcheverry at York University, TRCA developed a draft Renewable Energy Road Map in 2008. This report will be used as part of a "wise-head" workshop to identify five strategic actions for the Ontario government and identify new directions for TRCA to assist with the market transformation for renewable energy.

### Greening Health Care®

Greening Health Care® is designed to help hospitals reduce their energy use and thus help mitigate the effects of climate change through reductions in green house gas emissions. In 2008 there were 51 hospital sites participating in the program and they were able to reduce their annual energy use by 3.8 per cent below 2007 usage. This equates to a reduction of greenhouse gas emissions of 1,002 tonnes.

## SUSTAINABLE COMMUNITIES

### Market Transformation Programs (continued)

#### The Mayors' Megawatt Challenge®

The Mayors' Megawatt Challenge® is designed to help hospitals reduce their energy use and thus help mitigate the effects of climate change through reductions in green house gas emissions.

In 2008 there were 11 municipalities participating in the program and they were able to reduce their total energy use by 3.4 per cent below 2007 usage. This equates to a reduction of greenhouse gas emissions of 1,812 tonnes.

#### Sustainable Technologies Evaluation Program — energy component

With increasing energy costs and concern surrounding the environmental impacts of consuming non-renewable energy resources, the need for merchant-ready, market driven green energy solutions has never been greater. Sustainable Technologies Evaluation Program (STEP) was new in 2008 and aimed at evaluating the performance of various alternative energy technologies to improve market uptake.

Two projects were initiated under STEP energy in 2008 to evaluate the performance of alternative energy solutions, thereby improving understanding of the real costs and savings associated with these technologies. A brief summary of each project is provided below.

##### Archetype Sustainable House energy monitoring

A partnership has been formed with Ryerson University in Toronto to carry out energy monitoring of the systems installed in each of the two semi-detached sustainable houses built at the Living City Campus at Kortright in Vaughan. This project was initiated in 2008 with the purchase and installation of monitoring equipment in the houses. The primary objective of this project is to assess the thermal performance of the houses and determine the effectiveness and efficiency of the mechanical systems installed. Ultimately, the data will contribute to the development of simulation tools that will assist industry professionals in their evaluation and comparison of these systems.

##### Performance Evaluation of home-scale wind turbines

This study was initiated in 2008 with the purchase and installation of wind turbines for the Living City Campus at Kortright monitoring sites. The objective of the study is

to collect data on the energy produced and wind speed at each turbine in order to determine the potential of these devices to produce renewable energy in an urban setting. Understanding the amount of energy that can be produced by the turbines and the conditions that allow for their optimal performance will facilitate comparison with other renewable and non-renewable energy sources. Ultimately, findings will assist in the development of new policies and guidance documents encouraging broader uptake of small-scale wind turbine technology.

#### Sustainable Technologies Evaluation Program — water component

The primary goal of the water component of STEP is to advance the knowledge and practice of wet weather flow management through monitoring and applied research into the effectiveness and environmental impact of various water conservation and stormwater management practices.

The use of low impact development (LID) technologies to meet stormwater management requirements has become increasingly common in recent years; however, there remains a number of questions about how these perform under climate and soil conditions typical of the GTA. The water component of STEP helps to fill this knowledge gap by conducting detailed, multi-year monitoring evaluations of these technologies, and providing recommendations on their appropriate use and application. A few projects are highlighted below.

##### Permeable pavement and bioretention swale demonstration

In 2008, a three-year monitoring evaluation of a permeable pavement and bioretention swale was completed. The study demonstrated that both infiltration technologies work effectively to restore or maintain natural infiltration functions in an urban landscape, even on the low permeability clay-based soils that are common throughout the GTA. Study results yielded recommendations on design standards for permeable pavements and bioretention areas, as well as operations and maintenance practices for sustaining their long-term performance. Findings are currently being used to develop water management guidelines for application of these technologies on new and reconstructed parking lots. These guidelines and the detailed study results will continue to serve as an essential resource for developers and consultants that are considering the implementation of these LID technologies.





McVean farm  
before | after



### Rainwater harvesting

In 2008, monitoring was initiated at two rainwater new harvesting installations in Toronto — a high rise residential building and a large public school. These new sites will complement the ongoing evaluation of a rainwater harvesting system at a commercial printing facility in Toronto, which was initiated in September 2006. Together, these three sites will provide a good cross-section of different designs and water use needs. Final study results will be used to develop guidelines and design tools to encourage greater consideration of rainwater harvesting as a viable means of supplying non-drinkable water.

### Commercial roof runoff infiltration tank

Monitoring of a bottomless tank that captures and infiltrates roof runoff from two big box retail developments in Richmond Hill was initiated in 2008. The main objectives of the study are to assess actual system performance relative to its design goals, and to determine the site conditions under which infiltration tanks can be a cost effective option for meeting stormwater management requirements.

## Near-Urban Agriculture

### Toronto Urban Farm

The Toronto Urban Farm is a partnership between the City of Toronto and TRCA. The farm sits on approximately 3.2 hectares (eight acres) of TRCA-owned land near the southeast corner of Jane Street and Steeles Avenue at

Black Creek Pioneer Village. Located in one of Toronto's most vulnerable and stigmatized communities, this innovative community development initiative engaged youth and the community in urban organic farming, leadership development, environmental stewardship and health promotion. Services are provided through collaboration with the surrounding neighbourhood and organizations from various sectors, such as social agencies, schools, faith groups, and businesses.

The Toronto Urban Farm current activities include:

- > Employment of 68 youth to date at the farm — the introduction of green jobs in the Jane and Steeles area of Toronto.
- > Experimentation with heirloom varieties of eggplant, tomato, squash, carrot, bean, beet, okra, pepper, parsley, basil, onion, sage, leek and many more.
- > Engagement of youth in formal and informal sessions on leadership and life skills, including cross-cultural sensitivity, food security, time-management, and nutrition.
- > Creation of an Advisory Committee of representatives from several community agencies.
- > Preparation of farm site, including vegetation removal, installation of an irrigation system and fencing, soil tilling and bed preparation.
- > Hosted an Urban Farm open house attended by numerous community agencies, local residents, senior staff from TRCA and the City of Toronto, and the media.
- > Made local and more sustainable food production, affordable to residents of the GTA.

## SUSTAINABLE COMMUNITIES

### Near-Urban Agriculture (continued)

- > Held several community events including Composting Week Kick-Off (partnership with Composting Council of Canada), and a two-day work camp for 30 American youth from faith-based agencies.
- > Developed partnership with a local Starbucks Coffee shop to compost coffee grinds at RDTG.
- > Continued to support the Peer Nutrition Community Garden at RDTG (partnership with Toronto Public Health), which promotes healthy nutrition and social inclusion among newcomer women.

#### Other initiatives

**FarmStart** is a not-for-profit organization working toward increasing the presence of young and new farmers, operating their own farm enterprises, within the agriculture community. In 2008, TRCA signed a multi-year lease with FarmStart for 37 acres of TRCA-owned farmland at the historic McVean farm property located at Claireville Conservation Area, City of Brampton. FarmStart is working toward increasing the presence of young and/or new farmers operating their own farm enterprises within the agriculture community for the establishment of a research and training farm facility to support new farmers and immigrant communities through collaborative community development projects and cultural animation strategies.

**Everdale** is an organic farm and environmental learning centre. It is registered under the Ontario Corporations Act as a non-profit, educational organization. Its purpose is to teach sustainable living practices and operate an exemplary organic farm. Toronto and Region Conservation Authority is currently working with Everdale on the development of a Feasibility Study for approximately seven acres of farmland at the Living City Campus at Kortright for an urban agriculture project focused on educational programming.

**The City of Toronto** through the formation of an inter-governmental steering committee for the creation of the Historical Park, the allocation of \$100,000 to achieve this initiative through the redesign of the Discovery Walk system in Lower Humber, based on the Historical Park themes, and the inclusion of pedestrian lighting, sidewalk enhancements and 12 new heritage plaques on bridge abutments and at significant historical landmarks.

Some of the initiatives for 2008 that are working towards supporting local food system and community-based environmental sustainability include:

- > Completion of the Sustainable Near-Urban Agriculture Policy and Operational Procedures and Guidelines
- > Development of a Feasibility Study for urban agriculture at Kortright
- > Organization of a farm tour for Humber Watershed Alliance members
- > Working with the City of Toronto on the Urban Food Production Policy Framework
- > Local food procurement at TRCA facilities

### Archetype Sustainable House

#### Completion of the Archetype Sustainable Houses at the Living City Campus at Kortright

These houses, built to LEED (Leadership in Energy and Environmental Design) Gold and Platinum standards, showcase an amazing array of sustainable building technologies available to consumers. The construction of these homes was accomplished through a partnership with BILD (Building, Industry and Land Development, formerly the UDI and the Greater Toronto Builders Association) and the generous contributions of volunteers.

The houses will be part of Kortright's education curriculum that helps bring environmental, energy and sustainability issues to the attention of post-secondary students, adults and industry professionals.

Toronto and Region Conservation Authority developed an exciting new Climate Change education program in conjunction with the new secondary school curriculum. Students will not only learn about the causes and effects of greenhouse gases along the Climate Change Trail, they will also learn how they can contribute to an immediate and measurable positive impact on climate change by visiting the Archetype Sustainable Houses. The new requirements of the Ontario Curriculum will be enhanced through a hands-on approach to education that incorporates the new technologies available in the Archetype Houses and Climate Change trail.



Oak Ridges Moraine

## PLANNING and DEVELOPMENT

In 2008, in tandem with provincial agencies, TRCA has spearheaded a comprehensive review of urban flood management issues, using case studies of the Special Policies Areas (SPAs) of TRCA jurisdiction. An updated guideline document to assist municipalities in their official plan review of SPAs has been produced for landowner and agency guidance through the Province of Ontario. This document provides development study requirements for flood prone sites such as SPAs throughout Ontario and sets out requirements for integrating emergency planning as part of the technical assessment conducted by conservation authorities and municipalities.

In view of moving towards a culture of conservation in our urban planning agenda, Planning and Development provides some of the highlights of 2008.

### Major Development/Environmental Assessment projects

Clearly, we need a new way of planning growth. The initiatives begin a new dialogue on urban/community planning and development.

- > Participated in review process for municipal plans, inclusive of large scale Master Environmental Servicing Plans (MESPs) and community planning exercises for Mayfield Community (Caledon), Seaton Community/CPDP

(Pickering), Duffin Heights (Pickering), Employment lands in Vaughan and Richmond Hill, Cornell Secondary Plan (Markham), Stouffville communities.

- > Built Environmental Assessment review capacity to address new infrastructure projects for road, water and wastewater upgrades in Peel, York and Durham — all to service new growth and community expansions.
- > Participation in new urban transportation agenda including two subway Environmental Assessments (EAs), seven Transit City EAs, eight Transportation Master Plans, Metrolinx Implementation of GO projects, 400 series highways (GTA West, 407 East, 427), and sewers.
- > Provided technical input to large municipal Emergency Works process and procedures including Highland Creek infrastructure and stream corridor rehabilitation, and Coxwell Trunk Projects.
- > Provided expert assistance to municipalities for Ontario Municipal Board hearings (OMB) including OPA 140.
- > Presented a case before the Ontario Mining and Lands Commission for 119R Glen Road in Toronto to defend the “conservation of lands” criteria of the Conservation Authorities Regulation.

### Strategic policy and planning

- > Provided comment and strategic advice to municipal partners regarding their Official Plan Updates and Conformity Exercise and growth planning, inclusive of advancing the watershed and new green technology agenda (fast-tracked) — for example OPs for Richmond Hill, Vaughan, Markham, Mississauga, Peel and York Regions.



## SUSTAINABLE COMMUNITIES

### PLANNING and DEVELOPMENT (continued)

#### Special Policies Areas (SPAs)

- > Assisted with comprehensive planning reviews of SPAs or SPA technical updates for Official Plans in Toronto, Woodbridge, Bolton and Brampton.

#### Rouge Park

- > Initiated the Rouge East Lands Management Plan process incorporating a near-urban agricultural concept within the park framework.
- > Continuing to liaise with Agricultural Community Working Group regarding agricultural land management strategies within the Rouge Park.

#### Enforcement

- > With the largest construction year on record for TRCA's permits, TRCA's enforcement team managed a complex workload to address compliance to environmental requirements across the jurisdiction. The rapid pace and complexities of especially winter construction activities, presents major challenges to ensure that our regulations are enforced and that violations are addressed to the conservation authority's regulatory standards.
- > Staff experts have initiated training sessions in a workshop setting to build new strategies with municipal planning, engineering and enforcement teams to work to a higher standard of environmental compliance and a streamlined process with the construction industry.

#### Administration and financial

- > Initiated dialogue with individual municipalities to partner on Bill 54 requirements and streamline new application process for complete applications inclusive of critical environmental submission requirements for approvals.
- > Continued discussions with Building Industry and Land Development (BILD) work group on issues of fee schedule, financial funding of review process and trends in development review workload, as well as, service delivery.

### Oak Ridges Moraine Strategic Planning

The Regions of York, Peel and Durham have worked directly with TRCA and partner conservation authorities to fund ecological enhancements on the ORM.

In 2008, the three Regions contributed over \$500,000 that resulted in:

- > The creation of 2.8 hectares of new wetlands in five projects
- > The reforestation of 4.1 hectares of land in five projects
- > The riparian plantings on over six kilometres of shoreline in six projects
- > The planting of 27,400 trees and shrubs and 18,000 seedlings in the above projects

The staff or products of the York Peel Durham Toronto -Conservation Authorities Moraine Coalition (YPDT-CAMC) groundwater study supported the following projects within TRCA's jurisdiction in 2008:

- > York-Durham southeast collector project
- > City of Toronto combined sewer overflow project
- > Yonge Street subway extension to Highway 7
- > York Region chemistry and isotope study
- > Council of Canadian Academies' Groundwater Management paper for the Federal Government

### The "Caring for the Moraine" Project

Toronto and Region Conservation Authority participated with other Moraine Coalition partners to deliver numerous workshops for landowners across the moraine to help them understand, care for and use in a sustainable manner, the environmental features and functions on their lands.

Some of these workshops include:

- > Pond management
- > Creek care
- > Woodlot ecology and forest management
- > Invasive species management
- > Wetlands stewardship
- > Marketing rural properties on the Moraine, for real estate agents



Community stewardship in Malton

# Permitting and Planning

In 2008 TRCA's professional expertise was provided to assist municipalities and landowners to meet their environmental requirements in the following brief summary:

Activities	2007	2008
*Planning Applications processed	717	<b>708</b>
Development Permit applications received and processed	939	<b>1,000</b>
Development Applications Issued	804	<b>923</b>
Renewals and Revisions	117	<b>145</b>
*Environmental Assessments	N/A	<b>177</b>
Environmental Management Plan (EMP) monitoring	N/A	<b>11</b>
Solicitor/Realty Inquiries	1,089	<b>631</b>
Concept Development Inquiries	252	<b>215</b>
Violations Issued	125	<b>67</b>
Active, open permits requiring monitoring and inspection	1,504	<b>1,694</b>
Active OMB/ Mining and Lands Commission Hearings	N/A	<b>8</b>

\*These numbers do not include active and open applications which are in process however not completed.

# STEWARDSHIP

## Private Land Stewardship

Toronto and Region Conservation Authority expanded the Rural Clean Water Program outreach beyond the traditional agricultural community into the equestrian community and secured funding to develop an outreach program that meets the needs of this unique target audience.

- > A new suite of agricultural beneficial management practice project categories expanded TRCA's current list of program grants to farmers. These included deadstock composting, integrated pest management and fuel and chemical storage.
- > The Caring for the Moraine landowner contact program continued to share with landowners the technical and financial resources that are available to them to increase the wetland, woodland and riparian features on their rural properties. Targeted workshops with Real Estate Agents across the Moraine provided them with a presentation and take away tool kit to share with their clients who want to purchase property on the Moraine.
- > The Healthy Yards program engaged urban landowners in native plant gardening and organic lawn care workshops. Toronto and Region Conservation Authority focused on overseeding in 2008 and provided workshop participants with native grass seed and step by step instructions as an alternative to chemicals for achieve a lush green lawn.



## Community Stewardship

- > A new two-year community Stewardship project in the headwaters of Petticoat Creek was initiated with \$30,000 from Environment Canada's EcoAction Community Funding Program. As a result, the Pickering residents have been helping to restore local forests and riparian areas and meadows. Their hard work was showcased in the 2008 Communities in Bloom competition in Pickering.
- > The Port Union Stewardship Initiative started in January 2008 with two years of funding from Environment Canada's EcoAction Community Funding Program in the amount of \$55,000. Toronto waterfront residents in the Port Union community have eagerly participated in walks, planting events and the creation of school yard gardens in support of raising the environmental awareness within their neighborhood.
- > The Environmental Stewardship Pickering (ESP) project was launched in 2008. This collaboration is built upon the success of the Frenchman's Bay Watershed Rehabilitation Project partner's model and the many success stories of neighborhood environmental organizations across the City of Pickering.
- > Malton in Mississauga was the first pilot site for Trail Stewards Project. Toronto and Region Conservation Authority worked with community members to create a Malton trail map and developed four self guided outdoor activity stations along the trail for local schools and community members. Planned enhancement activities included tree and shrub plantings, litter clean-ups, nature walks and environmental workshops.
- > Family Nature Events lead 12 outings across the GTA. During their travels, the participants met a Saw whet owl and Barred owl at Claireville and a fox during the "Paw Prints" event in Pickering.

## Multicultural Environmental Stewardship

- > Toronto and Region Conservation Authority designed, launched and delivered curriculum based in-class presentations on Great Lakes and Water.
- > Communicated with over 245 adult English as a Second Language (ESL) and Language Instruction for Newcomers to Canada (LINC) students across the GTA.
- > Engaged 300 LINC students and staff in a field trip to Petticoat Creek along the shores of Lake Ontario. Participants enjoyed interpretive hikes and games followed by a tour and picnic at the Conservation Area.
- > Toronto and Region Conservation Authority conducted an extensive research on Peel demographics and created a database of 50 different organizations that support new Canadians in Peel Region.
- > The Environmental Experience program succeeded in engaging 1206 New Canadians in a wide range of activities at our Conservation Parks.

## EDUCATION

### Weston Leaders of Tomorrow

Lake St. George Field Centre launched the **Weston Environmental Leaders of Tomorrow** program, welcoming the first visiting group of this new program in the early spring. Funded by the W. Garfield Weston Foundation, the Weston Environmental Leaders of Tomorrow program provides two and a half-day residential visits for students and classes from high-priority areas of Toronto. The program focuses on the three pillars of



Ecological Literacy, Community Stewardship and Student Leadership. Adaptations to the program in September included the addition of a pre-visit in-class assembly program led by TRCA's Watershed On Wheels (WOW) team and a follow-up visit to the participating school by a Lake St. George instructional staff to reinforce the core messages of the program. This has since become known as the "Weston Model" by curriculum consultants within the participating school boards, lending additional validity to this new direction in environmental education programming. In 2008, over 850 students participated in the Weston program.

For more information, see "Greening Young Minds" story on page 38.

## Water Festivals (Peel and York Regions)

Toronto and Region Conservation Authority partnered with the Regions of Peel and York to deliver Water Festivals at Heart Lake and Bruce's Mill Conservation Areas (respectively). Combined over 11,000 elementary and 1,200 secondary students either participated in or led learning programs on water conservation, water efficiency, natural environment, climate change and sustainability issues. 2008 also marked the 10th anniversary of the York Children's Water Festival, which was commemorated with the announcement Our Greener Side Celebration, a sustainability festival that will be open to the public in conjunction with the York Water Festival and showcase local sustainability initiatives and opportunities available to residents of York Region and neighboring municipalities.

## Peel Environmental Weeks

This program launched at Albion Hills Field Centre. Modelled on the Weston Environmental Leaders of Tomorrow program, the Peel Environmental Weeks program has been tailored to meet the climate change mitigation priorities of the Region of Peel. Peel Environmental Weeks targets classes from high priority schools in providing funded two and a half day visits to Albion Hills Field Centre. Students experience the natural environment first hand and learn about ways that they can make changes in their own lives to help build a sustainable future.

## Bridging the Gap: From Environmental Education to Sustainability

In November 2008, TRCA hosted a Roundtable on Environmental Education and Education for Sustainable Development (ESD) — Bridging the Gap: From Environmental Education to Sustainability. Seventy five representatives from 35 organizations from across the Toronto region participated, including school boards, universities, colleges, municipalities, the Ministries of Education and Natural Resources, conservation authorities and NGOs. The focus was on an early framework for collaboration and partnerships, ultimately developing an integrated strategy that supports the development of sustainable citizens, students and communities.

## Atlantic Salmon fry

Atlantic Salmon fry raised at Claremont Field Centre for release into Duffins Creek. The staff and students at Claremont Field Centre raised Atlantic Salmon fry for release into the Duffins Creek as part of the Atlantic Salmon restocking program taking place within selected Lake Ontario watershed. Led by the Ontario Federation of Anglers and Hunters and supported by Banrock Station Wineries and the LCBO this provides a unique new program for students visiting Claremont Field Centre; the raising of Atlantic Salmon fry for reintroduction into the watershed makes an important connection between the health of the local watershed and their role in protecting it.

## Outreach Education — WOW

Watershed on Wheels (WOW) is TRCA's mobile environmental education classroom; providing unique conservation education programs that engage elementary students in hands on learning experiences within their community. Traditionally, this program is delivered across TRCA jurisdiction within the city of Toronto, and portions of Peel, York and Durham. Additional funding provided by the Region of Peel and a partnership established with Credit Valley Conservation enabled the addition of new WOW program supplies, a vehicle and hiring and training two new WOW staff. This resulted in the range the program was previously offered, to be expanded into CVC jurisdiction of Peel Region and allowed all elementary schools located within Peel Region access to this innovative program. In 2008, a total of 16,254 participants were engaged in interactive, curriculum linked programs and a record number of 6,795 students were engaged in the WOW program within the Region of Peel.

## SUSTAINABLE COMMUNITIES

### Yellow Fish Road® Program

The Yellow Fish Road® program is a partnership program that protects water quality through educating volunteers and residents of storm drains connection to local water supplies and proper household hazardous waste disposal. The volunteers then take to the streets painting yellow fish symbols near storm drains and distributing fish shaped leaflets to residents that live in the neighborhoods marked with the fish. The leaflets contain information the volunteers learned. Toronto and Region Conservation Authority engaged 495 elementary students from three public schools in a pilot project that took place in the City of Toronto within Ward 31 area of the City. This pilot project replaced the traditional method of painting fish adjacent to the storm drains with sticking yellow and black discs adjacent to the storm drains that read "storm drains flow into rivers and lakes." There are 56,000 residents that live in Ward 31 and 2,200 storm drains. The discs are expected to last longer, are more visible and have a message and phone number directly on them that the painted fish lack. Also in 2008, a total of 1,440 volunteers marked 3,166 drains and reached 9,069 homes with a water quality message.

### Aquatic Plants Program

The Aquatic Plants Program provides students with opportunities to participate in wetland restoration efforts taking place within the GTA. Teachers receive growing kits with everything they need to grow native aquatic plants in their classrooms. By mid-May, their plants are strong enough to survive in a natural environment and a field trip is booked to a local wetland restoration site where they plant the plants they grew. While participating in the half day field trip, students also rotate through four to five educational stations learning about the value of wetlands.

The Aquatic Plants Program had a record year in 2008 engaging 4,746 students at 16 priority wetland restoration sites. These students grew and planted 18,565 native aquatic plants across the GTA.

New to the Aquatic Plants Program in 2008 was the addition of three staff dedicated to monitoring and tending to the community stewardship terrestrial planting sites and some aquatic planting sites. The monitoring data collected, will be used for comparison of plant survival rates of community and classroom plantings. This data will assist TRCA in increasing survival rates of plants by selecting appropriate plant material, plant location and sites for future plantings.

2008 Education Program Participants Summary	Total Attendance
<b>Field Centres</b>	
Lake St. George	3,100
Claremont	2,723
Albion Hills	1,911
<b>Total</b>	<b>7,734</b>
<b>Black Creek Pioneer Village</b>	
General School	51,185
Dixon Hill	3,300
<b>Total</b>	<b>54,485</b>
<b>Kortright Centre</b>	65,719
<b>Total</b>	<b>65,719</b>
<b>Watershed On Wheels</b>	
WOW	16,334
Yellow Fish Road	1,440
Aquatic Plants Program	4,746
<b>Total</b>	<b>22,520</b>
<b>Investigating The Living City® Spaces</b>	
Winged Migration at Tommy Thompson Park	311
<b>Total</b>	<b>311</b>
<b>York Children's Water Festival</b>	
Student Participants	5,032
High School Volunteers	496
<b>Total</b>	<b>5,528</b>
<b>Peel Children's Water Festival</b>	
Student Participants	4,902
High School Volunteers	671
<b>Total</b>	<b>5,573</b>
<b>Albion Hills Ski Program</b>	
Student Participants	1,295
<b>Total</b>	<b>1,295</b>
<b>Bruce's Mill Maple Syrup School Program</b>	6,870
<b>Total</b>	<b>6,870</b>
<b>TCDSB Tree Planting</b>	500
<b>Total</b>	<b>500</b>
<b>Special Workshops, Conferences And Presentations</b>	
Teacher PD Sessions	634
Conferences and Symposium	1,065
(Booth Attendees)	462
EcoSchools Sessions	402
Special Sessions (Weston ELT,	21
Peel Enviro Weeks, In-Class Sessions)	101
Boyd Archaeological Field School	31
Archaeology In-Class Sessions	
Archaeology Classes in the Field Sessions	<b>2,716</b>
<b>Total</b>	
<b>TOTAL EDUCATION PROGRAM PARTICIPANTS</b>	<b>173,251</b>



Wild Wetland Splash at Heart Lake

## PARKS

### Wild Wetland Splash at Heart Lake Conservation Area

The outdoor aquatic playground was constructed at Heart Lake Conservation Area and opened to the public July 25, 2008. The design features a state-of-the-art barrier free 1,300 square metres wetland themed outdoor aquatic playground.

Key design features of the facility include:

- > Over 30 wetland themed, user-activated aquatic playground elements and shade structures. These elements are necessary to expand upon the existing client base and make the Heart Lake outdoor aquatic playground a destination point
- > A 550 person capacity.
- > State of the art 10,000 gallon sand filtered closed loop water recycling system. This system filters and reuses water, thus reducing the accumulation of waste water and need for fresh water input.
- > Ultraviolet (UV) water sanitation system.
- > Wastewater that is generated through operational maintenance will be distributed through a dispersal system to irrigate surrounding soft landscaping.
- > Energy and water efficient mechanical and washroom facilities, including low flow toilets and faucets, sensor automated lights and energy efficient pumps.

Public response was terrific, generating an increase in attendance of 7,008 people between July 25 and September 1, 2008, versus the same period of time in 2007.

## Audubon Certification

The Parks and Culture Audubon Certification Program provides TRCA with a unique opportunity to become an international leader in the Audubon Cooperative Sanctuary program for parks systems. Throughout and upon completion, the certification process of the program will provide TRCA with both a national and international platform to demonstrate its commitment to corporate sustainability and conservation methods, exhibit existing best management practices and serve to further develop and document existing best management practices.

- > Planted 300 Native shrubs, installed 100 bird nesting boxes and initiated spring invasive plant control at 15 sites at Glen Haffy Conservation Area.
- > There were 25 bird nesting boxes installed at Indian Line campground.
- > Planted 200 aquatic plants and 300 native shrubs, installed 100 bird nesting boxes, initiated spring invasive plant control at 15 sites at Albion Hills Conservation Area.
- > Initiated shorebird management monitoring program that is part of an international bird study program, Community Planting of 725 native trees and shrubs, TRCA planted eight hectares 17,000 seedlings and 212 aquatic plants, identified 12 invasive plant management sites at Claireville Conservation Area.
- > Planted 800 aquatic plants to coincide with Heart Lake Shoreline Naturalization Project, installed 100 bird nesting boxes initiated terrestrial monitoring at two sites at Heart Lake Conservation Area.



## SUSTAINABLE COMMUNITIES

### Bathurst Glen Golf Course

Toronto and Region Conservation Authority recognized that as an operator of a golfing facility, it has a duty to be good stewards of the environment. Bathurst Glen Golf Course (BGGC) is also working to develop itself as a "Golf 2.0" course.

In 2008, BGGC was successful in:

- > Accumulating a savings of 30 per cent (approximately \$7,000) through chemical use reduction.
- > Implementing an organic fertilizer program at the driving range facility: close to 90 per cent of fertilizer used was nature organic. This accounts for 15 per cent of total fertilizer use.
- > Incorporating evapotranspiration rates BGGC reduced water consumption by 20 per cent overall.

#### Integrated Pest Management (IPM)

This program provides an ecological approach to significantly reducing the use of pesticides on the golf course. Since BGGC started the IPM program in late 2006, TRCA has seen an ongoing reduction in pest control product use. Between 2006 and 2007, TRCA was able to reduce use by 50 per cent with an additional reduction of close to 35 per cent in 2008 for a total reduction of nearly 85 per cent in just two years.

#### Learning Centre

The Centre runs for six weeks during the summer, and provides top quality instruction for people who are interested in learning the game of golf for the first time or to help improve their game. In 2008, 160 students participated in the junior development program. They received instruction in golf, the environment, health and nutrition.

### 10<sup>th</sup> Anniversary York Region Water Festival at Bruce's Mill Conservation Area

The festival in 2008 was largest to date and helped demonstrate the need to expand the program with 5035 students attending. The festival was in partnership between York Region and TRCA. Over 50 curriculum-based activities provided students with hands-on, interactive opportunities to learn about water conservation, water protection and related environmental issues.

### Durham Catholic Region School Board Youth Environment Summit at Petticoat Creek Conservation Area

Students representing over 30 schools in Durham Region attended the first annual Youth Environment Summit at Petticoat Creek. This event was facilitated by teachers and environmentalists and led 200 students through activities and workshops demonstrating the importance of energy efficiency and conservation.

### Great Canadian TD Shoreline Cleanup (Host Facility) at Petticoat Creek Conservation Area

Petticoat Creek was one of the host facilities for this annual event; presenting itself as an environmental leader in the community. Volunteers from the community joined park staff in cleaning up approximately one kilometre of shoreline adjacent to the conservation area. Three tonnes of waste was collected. Park staff plan to participate in the event on an annual basis.

### Mountain Bike Rental Program at Albion Hills Conservation Area

Albion Hills has answered the high public demand for enhancing the already popular mountain bike program by partnering with Caledon Hills Cycling. Park visitors and campers will now be able to rent a mountain bike and enjoy over 45 kilometres of trails within the park. This program introduces new riders to the sport and promotes healthy and sustainable living practices.

### Heart Lake Master Plan Initiatives

Restoration Services staff has completed the shoreline naturalization at Heart Lake Conservation Area.

The Heart Lake Beach Centre has also undergone substantial renovations. Shoreline naturalization highlighted by planting over 3,000 aquatic plants, removing 200 metres of gabion baskets and 30 metres of asphalt pathway adjacent to the lake. Two-thirds of the Heart Lake Beach Centre building has been removed and the mechanical services have been updated to modern standards, utilizing energy efficient lighting and fixtures.



Peel Children's Water Festival



## Peel Children's Water Festival at Heart Lake Conservation Area

Heart Lake Conservation Area hosted the six day festival that involved over 5,000 students from Mississauga, Brampton, and Caledon. The festival also included over 1,000 adult chaperones, 1,000 member of the public, and over 500 high-school volunteers. Students learned about water issues through a variety of outdoor activities such as: Mark Cullen Gardening Show Live from Heart Lake, Fish Check-Up demonstration, Bird box construction (300 bird boxes built and given away), Trout Release (500 trout released), Plug in THE SUN® solar activities and aquatic planting along the shoreline.

## Energy Efficiency

The Parks and Culture infrastructure energy efficient retrofitting program has both social and economic benefits. From a social perspective the program will serve to demonstrate Parks and Cultures commitment to corporate sustainability and conservation mandates and have a positive impact on the public's perception of TRCA facilities. From an economic perspective the goals of the program are to reduce energy consumption at Parks and Culture facilities, therefore reducing annual utility expenses.

The 2008 highlights include:

- > Installed 33 metered faucets
- > Replaced 27 regular showers with low flow heads
- > Replaced 75 inefficient T-12 light fixtures energy efficiency T-8 fixtures
- > Replaced eight top loading washing machines with high efficiency front loading washers
- > Replaced four inefficient dryers with four high efficiency dryers at Indian Line Campground
- > Installed energy efficient pumps, sensor activated features and water recycling system at the Heart Lake Splash Pad
- > Calculation of savings: 10,232 kilowatt savings; 76,320 litres of water savings

## CULTURAL HERITAGE

### Black Creek Pioneer Village

#### Gateway to the Greenbelt Traveling Exhibit

Black Creek Pioneer Village (BCPV) outreach exhibit on the Greenbelt increased public awareness about BCPV's living countryside, routes to sustainability and legacy for future generations. The exhibit has given exposure to over 450,000 people at 28 locations in 15 months at fall fairs, libraries, environmental events, museums and conservation authorities.

## SUSTAINABLE COMMUNITIES



Black Creek Pioneer Village

### Black Creek Pioneer Village (continued)

#### Partnered Special Events

Collaborative partnered approach to special events builds capacity, attracts new markets, promotes cultural diversity and inclusivity, and strengthens community development. In 2008, two new partnered events took place: Hindu Heritage Festival and TVO Kids Day; also an expanded Brews Fest.

#### New Interpretive Programs

New interpretive programs were launched to increase visitor experience and enjoyment, increase repeat visits and length of visit. Herstory themed programming, including speaker series, storytelling and theatrical evening events, "Pastport to the Past" for kids, new costuming, and e-newsletter have all contributed to the success of the Village.

#### Digitization Project — Phase two

Digitization of BCPV collections through creation of high resolution digital database increased public access; increased material history scholarship and lays groundwork for web-based exhibits. Documentation of Schmidt-Dalziel Barn in preparation for 2009 barn bicentennial; addition of 2000 artifacts in the digital database improved access to collection data and images, reduced cost and time to acquire information, and improved data for collection, valuation and insurance coverage.

#### Local Community Engagement

Local Community Engagement provides venue to showcase local talent and host community events; facilitates access to disadvantaged and marginalized communities; contributes to quality of life of the community. Black Creek Pioneer Village hosted summer music program, City Environmental Day and welcomed over 4,500 visitors through special pass programs.

The Village welcomed 7,697 visitors during the 2008 Doors Open Toronto.

#### Standardized on biodegradable dinnerware

Starting May 1, 2008, all BCPV Pavilion and snack shop activities and picnic events switched to 100 per cent biodegradable dinnerware. This program has not only prevented dinnerware from occupying landfill space, but also set a precedent in TRCA's food services environmental standards.

#### Hosted City of Toronto Green Fleet Expo, May 2008 — great cooperative event between City of Toronto and TRCA

As the host of this Expo, TRCA has confirmed its partnership with the City of Toronto, as well as demonstrated its facilities and services to other municipalities. Municipal representatives from across Ontario have participated in a green partnership event and were familiarized with TRCA's facilities and operations.





Archaeology students

## Archaeology

### Boyd Archaeological Field School

Having completed its thirty-second season, the field school continues to train and inspire teenage students with an interest in pursuing archaeology and related professions.

Up to 40 students (ages 15 to 18) annually graduate the course having learned the techniques employed in the field of archaeology and directly contributing to the understanding of Ontario's past peoples. Their knowledge is strengthened about Aboriginal cultures and Ontario's pioneer settlers, as well as the interrelatedness between humans and their natural environment through time.

In 2008, twenty-one field school students participated from school boards across Ontario as well as one from the United States. Through this project, a new archaeological site at the Claremont Field Centre property was investigated for the first time, which has enhanced the local archaeological record as well as the rich historical context for the field centre.

### Cultural Heritage Master Plan

In 2008, using resources provided through the Peel capital funding, all TRCA properties within the Town of Caledon have undergone desktop review to broaden the understanding and mapping of known or potential intact cultural heritage landscapes. Field verification has begun and will continue by TRCA staff and field stewards as opportunities arise.

The data sharing agreement is in place with the Ontario Ministry of Culture to examine information pertaining to

artifact collections for all archaeological sites registered within Peel Region which will provide a comparison for the ways in which TRCA artifact collections are housed and used, and will feed recommendations for the establishment of regional artifact repositories within the province.

The pilot project for "Heritage Stewards in the Field" was initiated for the Claireville Conservation Area with participants from the Friends of Claireville group and other local residents, which will provide these stewards with the knowledge and tools required to identify the types and locations of cultural heritage landscapes and share that knowledge with Archaeology staff to continue to build upon the knowledge of such resources on TRCA lands. This program will be expanded to other TRCA properties in 2009.

- > A total of 21 students attended our educational programs at the Boyd Archaeological Field School; approximately 90 students attended archaeology in-class education sessions
- > Over 4,500 acres reviewed for cultural heritage landscapes (primarily desktop review)
- > A total of 15 participants in the pilot "Heritage Stewards in the Field"
- > A total of 19 Archaeology Resource Management Services staff (FT and supplementary), plus 11 volunteers (including two co-op students)
- > A total of 57 archaeological consulting projects were conducted by TRCA's licensed archaeologists: one for stage one (archival and archaeological potential); 55 for stage one to two (exploratory fieldwork); one for stage three to four (site excavation)

## Greening jobs



*“The Professional Access and Integration Enhancement (PAIE) Program is a continuation of the efforts of TRCA to improve access to environmental professions for skilled newcomers.”*





Back in the Philippines, Leany Moreno had a Master of Science in Chemical Engineering from the University of San Carlos in Cebu City, and had more than eight years experience in her field. Along with her husband and two children, Leany immigrated to Toronto in March of 2008, in the hopes of finding a brighter future for her family.

But finding a job in her field proved to be a difficult task, and the future didn't seem bright as many people discouraged her from getting her Professional Engineers of Ontario (PEO) professional license. According to some it would be a long, costly process and that her dreams of getting a Canadian engineering job would be very small.

Every year more than a 100,000 new immigrants come to Ontario, many of them are like Leany who have international experience, but are finding it tough to translate their skills into a Canadian experience. Language, social and economic barriers were challenges they had to overcome all while learning how and where to find a job that fit their skills.

In the fall of 2008, an innovative program was launched to help internationally trained environmental engineers obtain the specific training and work experience they need to transition into Ontario's workforce.

The Professional Access and Integration Enhancement (PAIE) Program is a continuation of the efforts of TRCA to improve access to environmental professions for skilled newcomers. Toronto and Region Conservation Authority is the lead organizer of the program which is being implemented with a joint investment from Citizenship and Immigration Canada in the Government of Canada and Ministry of Citizenship and Immigration in the Government of Ontario.

"Before the PAIE program, I was working as a part time breakfast server," said Leany Moreno. "I tried on my own to apply to jobs, and went to several employment programs, but nothing was working out. The work culture in the Philippines and in Canada are very different, and it was hard to learn how to make my new life in Canada a success."

Toronto and Region Conservation Authority received a total of \$376,323 for the PAIE Program as part of the bridge training funding announced by Federal Minister Finley on June 2, 2008 and Provincial Minister Chan on May 12, 2008 to help newcomers gain employment in their field. In the fall, 40 internationally trained environmental engineers began the program which includes 150 hours of Enhanced Language Training complemented by 24 technical workshops and a 12 month full-time, highly-skilled, paid work placement in an area related to their field with a host company.

Toronto and Region Conservation Authority implemented the PAIE Program through its Environmental Volunteer Network (EVN), which has been in place since 2002. One of the objectives of the EVN is to help skilled immigrants integrate into the environmental workforce. The PAIE Program works in conjunction with Accessible Community Counselling and Employment Services (ACCES), Professional Engineers Ontario (PEO), and Workplace Communication and Diversity Inc. (WCD).

Leany learned about the PAIE Program through ACCES and promptly joined the program. She is currently doing a one year placement with the Regional Municipality of York as an environmental specialist and is also on her way to completing her PEO entrance exam to be a professional engineer by the end of the year.

"There was so much to learn through the PAIE program that I don't think I would have gotten from any other program," said Leany. "It taught me valuable skills and increased my self-confidence. On December 24, 2008 I got the news that I was hired for the placement I interviewed for and I couldn't stop jumping for joy! It was the best present anyone could have given me and it's all because of the PAIE program."





## Greening the economy

The top Canadian news story in 2008 was the international financial crisis. It was the greatest financial economic hit to the GTA in more than 80 years. When nature is faced with adverse conditions and rapid change, it often adapts by regenerating in order to survive.

As stewards of the environment for more than 50 years, Toronto and Region Conservation Authority (TRCA) is helping businesses, people, communities and youth to adapt to a green economy, where the production, exchange, distribution and consumption of goods and services are sustainable. The financial crisis produced a need to develop effective ways to streamline and lower costs — making a model for the green economy a viable solution to many economic woes.

In 2008 TRCA introduced many green regeneration projects to the region. There was the regeneration of the Mimico Waterfront Park, the Don Mouth Naturalization, the Port Lands Protection Project Environmental Assessment, and the completion of the Wicksteed Erosion Control Project.

But the greatest of these accomplishments is how TRCA used green persuasion to engage the public. In recent years we have been bombarded with information about green issues. The information was sometimes too generalized for people to comprehend, causing confusion and annoyance because often the information lacked a personal and direct connection. All people saw was a gloomy picture that scared and immobilized them. There was little action because people didn't know what to do and how to do it. In 2008 TRCA not only showed them how, but did it in a way that made each person a steward of the environment.

In early 2008, 70 real estate agents in Caledon East learned about how to market rural properties in the Oak Ridges Moraine. Their lessons would be useful to new homeowners in the area who wanted to learn more about reducing their footprint. Hundreds of people came out to a workshop on Low Impact Development that was created in partnership with Credit Valley Conservation. These workshops have been successful in educating municipalities, developers



*“Toronto and Region Conservation Authority is helping businesses, people, communities and youth to adapt to a green economy, where the production, exchange, distribution and consumption of goods and services are sustainable.”*

and consultants in sustainable water management and led to a number of pilot programs in the region. The massive engagement of hundreds of businesses in Partners in Project Green: an Eco-Business Zone will also show companies how to green their bottom lines.

People also needed the chance to see the beauty of their surroundings in order to better appreciate it. That's why TRCA continues to celebrate local accomplishments in the communities it serves. In 2008 many people attended the community celebration of the completion of the Mimico Waterfront Park Phase one project and more than 600 paddlers also participated in the Paddle the Don event that raised awareness about the need to protect the Don River.

“We've always heard to ‘think globally and act locally,’ but now it's time to care locally,” said Brian Denney, CAO, TRCA. “When we care locally, we take care of what's immediately in front of us and the goals become achievable. As we move forward one step at a time we'll begin to see meaningful change.”

There is still a lot of work to be done. In a recent report by the World Wildlife Fund, Canada ranked last against all G8 nations. The report found that Canada's emissions rates per capita were higher compared to the other industrialized country's averages.

As Canada's largest urban centre, and the largest conservation authority in Ontario, TRCA will continue to invest in new partnerships that will bring about positive change such as the one formed in 2008 with FarmStart. The partnership will train new farmers and grow local produce at the Claireville Conservation Area in Brampton. It's pioneering efforts like these that make TRCA a leader in the GTA.

What we've seen in 2008 is that if we begin to care locally, the future will also begin to look brighter and the Toronto region will become a cleaner, greener, healthier place to live.



# BUSINESS EXCELLENCE



Multicultural Day at Downsview

## INFORMATION and TECHNOLOGY SERVICES

Information and Technology Services contributed to the productivity, peer-to-peer communication and efficient storage/retrieval of TRCA intellectual property.

A few highlights of 2008 include:

### Information Technology

- > Over 90 new PCs have been purchased and deployed.
- > Deployed new Lotus Notes Server at Downsview Office. This Server functions as a real-time replica of the main Notes Server. This replica provides a redundant "copy" of all TRCA email and Notes databases for Disaster Recovery as well as improves bandwidth usage between Head Office and Downsview.
- > Contracted development of number of new Lotus Notes applications and enhancement to improve workflow and efficiencies.

- > Continued development of Envirobase, MS SQL relational database.
- > Exceeded an overall 99.9 per cent network up-time for the entire TRCA Wide Area Network. This includes: Head Office, Black Creek, Downsview, Boyd Field Centre, Kortright, Restoration Services, Eastville.

### Records Management/Office Services

- > Continued implementation of the Laserfiche Electronic Document Management System.
- > Over 6,027 documents/records scanned and were brought into Laserfiche
- > Completed 10 Freedom of Information requests.
- > Created 2,792 Central Files.
- > Destroyed 761 files as per retention policy.
- > Requested 1,514 Files from storage.

### GIS/Mapping

GIS/Mapping holds the key to our understanding of the GTA's evolution and our communication to stakeholders.



Accomplishments in 2008 include:

- > Responded to 870 individual GIS Requests for Mapping and related GIS activities.
- > Approximately 4,000 hectares of new 1:2000 Base mapping acquired for floodplain mapping.
- > Finalized GIS riparian methodology.
- > Built new intranet based e-fishing DB and moved over all historic data.
- > Mapped eight kilometres of trails in Claireville.
- > Developed 20-hectare Swan Lake management plan.
- > Harmonized TRCA Property data with parcel fabric
- > Humber and Rouge watershed plans finalized
- > UFORE — TRCA acted as PM for municipal partners (Peel and Ajax) and provided all GIS support; field maps and landcover maps.
- > Added metadata to over 30 layers.
- > Palgrave Trail Plan.
- > Submitted 10 roll numbers under Conservation Land tax program.
- > Created Beneficial Management Practices mapping for TRCA Agricultural Lease properties.
- > Launched GPS data collection using Trimble data collector to various departments at TRCA. Natural Heritage used it to collect data for their Long-Term Monitoring Plots. Conservation Lands is using it for Trails collection and inventory, as well as Property Site Securement and Property Audits.
- > New trails data was collected for Glen Major, Pleasure Valley, Walker Woods, Oak Ridges Corridor Park and Bolton RMT.
- > Over 2,000 flora species and 2,500 fauna species were added to TRCA's data collection.
- > Over 1,101.69 hectares of new vegetation community data was added to TRCA's data collection.

## SUSTAINABILITY MANAGEMENT SYSTEM

Sustainability Management System (SMS) provides reports on all internal/policy/operational efforts towards corporate sustainability and outlines a process of continual improvement toward operational sustainability, annual review of progress and setting of new targets and objectives.

2008 was a successful year from a number of perspectives, as TRCA staff continue to boldly push towards operational sustainability. Some of 2008's highlights are as follows:

- > Completion of corporate Climate Change strategy.
- > Four TRCA Offices certified "EcoOffices."
- > Deal completed with Downsview Park to retrofit TRCA's Downsview office to renewable, geothermal heating and cooling.
- > Continuation of EcoOffice and EcoSchool programs at TRCA offices and education centres.
- > Commenced Energy Management Plan for TRCA.
- > IT-based sustainability enhancements, including: 25 per cent more efficient power supplies in all computers; paper saving use of bulletin board, Email and Laserfiche for various internal documents; continued sustainable disposal and recycling of e-waste; enhancement of telecommuting abilities through off-site access for staff to TRCA files.
- > Moved to 100 post-consumer FSC paper.
- > New energy efficient roof installed at Black Creek Visitors Centre.
- > Lighting retrofits (motion sensors) at Head Office and Downsview office (through EcoOffice program).
- > Indian Line moved to solar hot water.
- > New energy efficient windows at Boyd Office.
- > Corporate commitment to obtaining 40 per cent of food products from local sources.
- > Continued pursuit of Audubon certification at CAs and Bathurst Glen Golf Course.
- > Instituted EcoFriendly indoor pest control at Head Office.
- > Completed and approved TRCA Agricultural policy.

## VOLUNTEERISM and DIVERSITY

Diversity is promoted in TRCA through the Diversity Subcommittee, events like the Multiculturalism Day Barbecue, and a supportive organizational culture. Toronto and Region Conservation Authority promotes volunteerism and diversity within the organization, the community, and other employers through two main programs: Environmental Volunteer Network (EVN) and Professional Access and Integration Enhancement (PAIE).

## BUSINESS EXCELLENCE

### Environmental Volunteer Network (EVN)

Since 2002, through its Environmental Volunteer Network (EVN), TRCA has been working to assist thousands of diverse volunteers in finding opportunities in the environmental field. 2008 was another very successful year for the network.

#### Mentoring Partnership Program

Toronto and Region Conservation Authority Mentorship Program, in partnership with Toronto Region Immigrant Employment Council (TRIEC), has hired 26 mentors and matched 18 TRCA staff (mentors) with internationally trained environmental professionals (mentees).

#### Website and Marketing

Further improvements have been made to the EVN website to ensure the program is being well promoted. Backend and lay-out is finished and ready for launch.

#### Networking and Outreach

Environmental Volunteer Network has conducted outreach to existing and potential partners. More than 100 potential new partners have been identified.

Environmental Volunteer Network has participated in more than 15 networking events hosted by our main partners, collaborative organizations and key community stakeholders, as well as participated in Eco Stock, a job fair, and delivered a speech about environmental careers to more than 350 francophone students. Internally, the coordinator has initiated communication with TRCA staff to work towards meaningful volunteer, internship and training opportunities.

#### Volunteer Management Toolkit for Environmental Employers

Environmental Volunteer Network has developed a practical volunteer management toolkit to assist small and medium size environmental organizations develop their capacity for working effectively with diverse volunteers.

#### Diversity Toolkit for Environmental Employers

A new diversity toolkit has been developed and will be available to potential partners and employers. Volunteers could potentially be trained to conduct diversity information workshops.

### Environmental Educators

Environmental Volunteer Network has partnered with internal education staff that have committed to providing our volunteers with formal training to become Environmental Educators. In this role, 10 to 15 volunteers will be trained to work in the community to deliver environmental awareness and education through active, practical and fun activities for children.

### Diversity Network

Established in 2003, the Diversity Network is comprised of more than 22 organizations and offers a platform to discuss and develop diversity initiatives. Environmental Volunteer Network is involved in diversity initiatives partnering with the Sustainability Network, Clean Air Foundation and Nature Canada.

### New Project in Progress

Environmental Volunteer Network has developed a new program for skilled newcomers and submitted a funding proposal. This unique initiative will provide mentoring, training workshops and a work placement to participants.

### Professional Access and Integration Enhancement (PAIE)

Professional Access and Integration Enhancement (PAIE) is a bridging program that strives to assist internationally trained environmental professionals in obtaining high-skilled employment that is commensurate with their training and experience, while helping to remove barriers to professional licensure. The PAIE Program began in 2006 with a group of 35 internationally trained planners and geoscientists. In 2008, only two months after the completion of the program, 24 out of 35 participants were working in their professional field.

Due to this incredible level of success, the PAIE Program has grown and is now funded by both the federal government through Citizenship and Immigration Canada (CIC) and the province through the Ministry of Citizenship and Immigration (MCI). In 2008 with the support of Professional Engineers Ontario, ACCES Employment Services and Workplace Communication and Diversity Inc., the PAIE Program began working with a group of 45 internationally trained environmental engineers.



PAIE Program participants

The commencement of the second PAIE Program was celebrated at the Program Launch on October, 2008, which was widely attended by representatives from both levels of government, industry professionals, community leaders, incoming and outgoing PAIE participants, and TRCA staff.

As of December 2008, The PAIE Program has succeeded in placing 11 participants in engineering work placements in both the public and private sector, providing real opportunities for professional growth and advancement under the supervision of a professional engineer. In 2009, PAIE will continue to seek out and secure employment opportunities for our participants, while continuing to build the capacity and develop future programs.

## MARKETING and COMMUNICATIONS

In 2008 sustainability issues continued to rate at or near the top of issues of public concern in the Toronto region. Responding to this high level of public interest, TRCA built on existing communications initiatives to engage people in programs to build The Living City®, and introduced some new ones.

Prominent among the new programs was the “Life is Better in Peel” campaign. The campaign was developed by TRCA to generate public awareness of the work of TRCA and Credit Valley Conservation in enhancing the quality of life in the Region of Peel, and setting the stage for future social marketing initiatives around climate change. Through

outdoor advertising, a dedicated website, and a photo contest, thousands of Peel residents’ attention was directed to the natural wonders in Peel Region and the many projects underway to build a cleaner, greener, healthier place to live and work.

Equally significant were a number of Marketing and Communications projects to help people better understand TRCA programs and how to benefit from them. The introduction of a new brochure about TRCA Planning and Development policies and procedures has helped property owners and building professionals — particularly those new to TRCA — understand how TRCA can work with them to plan and develop built structures.

Through dedicated media relations efforts, the annual “Paddle the Don” event generated exceptionally positive media coverage, including a front page image in the Toronto Star, drawing attention to the Don River as a valued natural resource in the Toronto region.

The launch of Partners in Project Green (PPG): A Pearson Eco-Business Zone, was a communications success for TRCA and all founding partners. Conveying a new, ground-breaking business collaboration concept in ways that compel business leaders to participate is challenging. The PPG launch event, the accompanying communications materials, the media coverage, and above all, the ongoing high level of enthusiasm for this initiative have set the stage for creating a new kind of forward-thinking, internationally recognized business zone around Toronto Pearson in 2009 and beyond.



## BUSINESS EXCELLENCE

### RECOGNITION AWARDS

Toronto and Region Conservation Authority awards Honour Roll Awards annually to a select group of individuals, organizations or corporations who have made a significant, special or unique contribution to the work of TRCA. A tree is planted in the recipients name at select TRCA locations.

The following five awards were presented on June 27, 2008 at Black Creek Pioneer Village:

#### Joanna Twitchin

For her active involvement in numerous community organizations and activities, including as a member and chair of the North Etobicoke Revitalization Partnership, Environmental Awareness Work Group, where she dedicated countless hours to protecting the local environment and promoting local initiatives; for her volunteer efforts, participation and support of the Great Canadian Shoreline Clean-up and many major clean-up events in local parks and ravines along the Humber River; for her coordination of the Great Humber River Canoe Race for more than two decades; and for her devotion and passion for the environment and for being a powerful advocate for the preservation of greenspace in keeping with TRCA's vision for The Living City®.

#### Black Creek Conservation Project of Toronto

For contributing to the protection, restoration and promotion of the Black Creek and Humber watershed over the past 25 years; for planting trees and streamside vegetation, improving aquatic habitat, establishing pedestrian trails and installing interpretive signage for the betterment of community health; for planning and implementing programs that have increased environmental awareness and local action by thousands of community volunteers and students surrounding the Black Creek; and for participating as a member of the Humber Watershed Alliance, a community based task force established to assist with the management of the Humber River watershed.

#### Greater Toronto Airports Authority (GTAA)

For the significant role it has played in meeting the goals of Toronto and Region Conservation Authority's vision for The Living City®; for its commitment to environmental excellence in their daily operations; and for its leadership in the development of Partners in Project Green: A Pearson Eco-Business Zone.

#### Humber Watershed Alliance

For sharing its members' knowledge, skills and experience over the past eleven years to assist Toronto and Region Conservation Authority in overseeing The Living City® vision; for implementing priority recommendations from watershed management plans to protect, restore and celebrate the Humber River watershed; for advocating and building capacity within the community to undertake best management practices to improve watershed health; for contributing to the publication of award winning documents such as *Listen to Your River: A Report Card on the Health of the Humber River Watershed* (2007); and for helping to maintain, promote and enhance the natural and human heritage values that distinguish the Humber as a Canadian Heritage River.

#### Rouge Watershed Task Force

For dedication, energy and extensive hours invested in preparation of the *Rouge River Watershed Plan: Towards a Healthy and Sustainable Future*; for insight into the critical decisions that will affect watershed health in the immediate years ahead; for eagerness and commitment to adopt a plan based on the latest scientific studies, including groundbreaking modelling and innovative social science research; and for its members' personal efforts at initiating the plan's implementation.

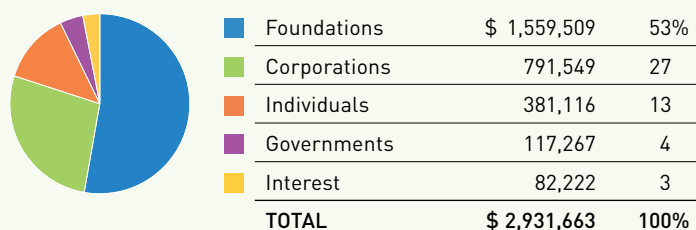
As part of TRCA's Service Recognition program, 65 employees were recognized with over 1,000 years of service. Toronto and Region Conservation Authority's Employee/Recognition Sub-Committee is comprised of Authority Chair Gerri Lynn O'Connor and members David Barrow, Suzan Hall and Maja Prentice.

### CONSERVATION FOUNDATION

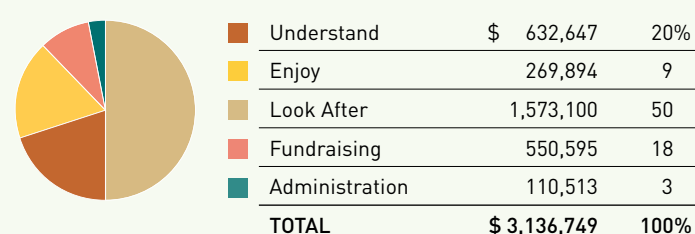
The Conservation Foundation enjoyed a great year in 2008. There were three outstanding highlights.

- > Toronto and Region Conservation Authority continues to protect the most precious land in the GTA by purchasing it. We now own over 16,593 hectares.
- > The foundation continued to recruit monthly donors by going door-to-door in the GTA. Homeowners remain keen to support to an environmental organization works where they live, where they work and where they raise their children.

### Here's where the money came from in 2008



### Here's where the money went in 2008



Notes: The excess of expenditures over revenues were financed by a draw-down of funds available at the beginning of the year.  
Audited financial statements are available on request and are also on our website.

- > The 15th Annual Charles Sauriol Environmental Dinner for The Living City® was another huge success. Over 850 people were inspired by Ray Anderson, CEO of Interface Carpets and an eloquent champion of sustainability.

## FINANCIAL OVERVIEW

In 2008, TRCA spent \$79.2 million on environmental programs, an increase of \$6.4 million over 2007. In 2003, total expenditures were just over \$38 million, highlighting the very dramatic growth in activity over the last five years. Half of this growth has been financed by increased funding from municipal sources which has risen from \$18.8 million in 2003 to \$39.9 million in 2008. Much of the increase in municipal funding can be attributed to the Regional Municipality of Peel which has continued its strong support of conservation programs in recent years, particularly in the area of climate change mitigation. In 2008, the Region's levy contributions grew to \$11 million, from \$7 million the previous year.

Toronto and Region Conservation Authority has also experienced significant growth in user fees which grew from \$8.7 million in 2003 to \$13.8 million in 2008. Contributions from Waterfront Toronto, although significantly lower than in prior years, accounted for nearly \$6 million in project funding. Significant growth also occurred in contract work for local and regional municipalities, amounting to almost \$6 million in 2008. Contributions from federal and provincial governments totaled \$7.8 million for the year.

Including appropriations from reserves in the amount of \$31,275, TRCA concluded 2008 with a modest surplus of \$58,298, significantly below the budgeted surplus of \$600,000. Significant variances occurred in user fees and retail sales, which totaled \$13.8 million, \$1.2 million below the budgeted amount of \$15 million. The wet summer weather in 2008 was one of the main reasons TRCA could not meet revenue targets for the year. Most of this revenue shortfall was off set with corresponding curtailment of expenditures in the affected program areas. Further, the Conservation Foundation of Greater Toronto fell short of its targeted support for TRCA by an amount of \$769,000. Both organizations are striving to implement innovative fund raising projects, particularly in the area of individual donor programs. Conceding that under the current economic climate it may take several years for the Foundation to begin providing funds adequate for TRCA's needs, the 2009 target has been lowered to \$500,000. Unique to 2008, TRCA sold its milk quota licence for a gain of \$434,000.

Toronto and Region Conservation Authority cumulative deficit now stands at \$2,486,424, of which \$653,461 can be attributed to the construction costs of the Restoration Services Centre (RSC), which will be fully financed over the next several years. The 2009 budget provides \$600,000 for the reduction of the deficit, including \$200,000 for the reduction of the deficit attributable to the construction costs of the RSC. Toronto and Region Conservation Authority's cash flows are sufficient to ensure that no borrowing is required to finance the deficit.

## TORONTO AND REGION CONSERVATION AUTHORITY MEMBER MUNICIPALITIES AND MEMBERS 2008

<p>Town of Mono and Township of Adjala-Tosorontio</p> <p>G. Mason</p> <p>The Regional Municipality of York</p> <p>D. Barrow *</p> <p>B. Fisch</p> <p>J. Heath *</p> <p>L. Pabst</p> <p>G. Rosati</p> <p>*Executive Committee Members</p>	<p>The Regional Municipality of Durham</p> <p>C. Jordan *</p> <p>B. Littley</p> <p>G. L. O'Connor (Chair)*</p> <p>The Regional Municipality of Peel</p> <p>E. Adams</p> <p>G. Gibson</p> <p>M. Prentice *</p> <p>J. Sprovieri</p> <p>R. Whitehead *</p>	<p>City of Toronto</p> <p>P. Ainslie</p> <p>M. Augimeri *</p> <p>B. Bertie</p> <p>L. Bruce</p> <p>G. Cowbourne</p> <p>G. De Baeremaeker</p> <p>R. Ford *</p> <p>L. Griffin</p> <p>S. Hall *</p> <p>R. Mathivanan *</p> <p>P. Milczyn</p> <p>R. Moeser *</p> <p>J. Parker</p> <p>A. Perruzza *</p>
--	---	---

## EXECUTIVE COMMITTEE

Chief Administrative Officer/Secretary-Treasurer  
B. Denney

<p>Director, Watershed Management</p> <p>A. Freeman</p>	<p>Director, Finance and Business Services</p> <p>J. Dillane</p>	<p>Director, Planning and Development</p> <p>C. Woodland</p>	<p>Director, Restoration Services</p> <p>N. Saccone</p>	<p>Director, Parks and Culture</p> <p>D. Edwards</p>	<p>Director, Ecology</p> <p>D. Martin-Downs</p>
---	--	--	---	--	---



## TORONTO AND REGION CONSERVATION AUTHORITY SUMMARIZED FINANCIAL STATEMENTS

December 31, 2008

---

### Auditors' Report

Grant Thornton, LLP  
Suite 200,  
15 Allstate Parkway  
Markham, ON  
L3R 5B4

T 416-366-0100  
F 905-475-8906  
www.GrantThornton.ca  
Canadian Member of Grant Thornton International

#### To the Members of the Toronto and Region Conservation Authority

The accompanying summarized statements of financial position and financial activities and deficit are derived from the complete financial statements of the Toronto and Region Conservation Authority ("TRCA") as at December 31, 2008 and for the year then ended on which we expressed an opinion without reservation dated May 29, 2009. The fair summarization of the complete financial statements is the responsibility of TRCA's management. Our responsibility, in accordance with the applicable Assurance Guideline of the Canadian Institute of Chartered Accountants, is to report on the summarized financial statements.

In our opinion, the accompanying financial statements fairly summarize, in all material respects, the related complete financial statements in accordance with the criteria described in the Guideline referred to above.

These summarized financial statements do not contain all the disclosures required by Canadian generally accepted accounting principles. Readers are cautioned that these statements may not be appropriate for their purposes. For more information on TRCA's financial position and results of financial activities and cash flows, reference should be made to the related complete financial statements.



Chartered Accountants  
Licensed Public Accountants  
Markham, Canada  
May 29, 2009

## Toronto and Region Conservation Authority Summarized Statement of Financial Activities and Deficit

Year ended December 31

	2008 Budget	2008 Actual	2007 Actual
<b>Expenditures</b>			
Watershed management and health monitoring	\$ 12,810,900	\$ 11,297,980	\$ 15,508,116
Environmental advisory services	4,709,200	4,505,969	4,052,229
Watershed stewardship	16,255,400	16,078,133	12,554,262
Conservation land management, development and acquisition	30,629,000	25,158,698	18,644,488
Conservation and education programming	17,173,100	16,406,912	16,169,963
Corporate services	6,887,400	5,788,418	5,807,710
Vehicle and equipment, net of usage charged	–	(50,145)	10,160
	88,465,000	79,185,965	72,746,928

## Revenue

### Municipal

Levies	34,562,500	30,413,614	24,975,111
Other	8,461,400	7,461,733	4,716,807

### Government grants

MNR transfer payments	845,800	845,753	845,753
Provincial (other)	6,091,300	5,539,347	4,214,599
Federal	1,469,800	1,465,028	1,341,593

### TRCA generated

User fees, sales and admissions	15,027,600	13,767,194	13,440,279
Contract services	2,323,500	5,957,940	956,072
Investment income	500,000	470,879	525,521
Proceeds from sale of properties	250,000	117,524	374,458
The Conservation Foundation of Greater Toronto	1,686,700	2,150,095	1,334,502
Donations and fundraising	2,985,800	542,004	1,383,758
Facility and property rentals	2,353,900	2,736,381	2,261,976
Canada Post Corporation agreement	259,400	9,872	9,721
Waterfront Toronto	11,116,600	5,962,436	13,771,773
Sales and property tax refunds	230,000	220,316	163,891
Compensation agreements	382,500	374,329	217,151
Sale of milk quota license	–	434,162	–
Sundry	736,200	744,381	788,324
	89,283,000	79,212,988	71,227,980

<b>Excess of expenditures over revenue</b>	818,000	27,023	(1,518,948)
Appropriations from (to) reserves	(218,000)	31,275	(175,110)
	600,000	58,298	(1,694,058)
Deficit, beginning of year	(2,524,722)	(2,524,722)	(830,664)
Deficit, end of year	\$ (1,924,722)	\$ (2,466,424)	\$ (2,524,722)

## Toronto and Region Conservation Authority Summarized Statement of Financial Position

Year ended December 31

	2008	2007
<b>Assets</b>		
Cash and cash equivalents	<b>\$ 10,814,384</b>	\$ 7,477,394
Marketable securities	<b>6,577,733</b>	3,657,281
Receivables	<b>12,207,269</b>	11,810,580
Inventory	<b>518,757</b>	529,359
Prepays	<b>286,098</b>	193,468
	<b>\$ 30,404,241</b>	\$ 23,668,082
<b>Liabilities</b>		
Payables and accruals	<b>\$ 11,329,386</b>	\$ 9,089,751
Deferred revenue		
Municipal levies	<b>5,778,910</b>	6,592,885
Capital, special projects and other	<b>13,745,384</b>	8,461,908
Vacation pay and sick leave entitlements	<b>1,746,068</b>	1,738,335
	<b>32,599,748</b>	25,882,879
<b>Fund Balances</b>		
Reserves	<b>2,016,985</b>	2,048,260
Deficit	<b>(2,466,424)</b>	(2,524,722)
	<b>(449,439)</b>	(476,462)
Amounts to be funded in future years	<b>(1,746,068)</b>	(1,738,335)
	<b>(2,195,507)</b>	(2,214,797)
	<b>\$ 30,404,241</b>	\$ 23,668,082

On behalf of TRCA  
Chair  
Secretary-Treasurer





**Legend**

- River / Stream
- Greenbelt / Tree Boundary
- Regional Municipal Boundary
- Local Municipal Boundary
- Watershed Boundary
- Conservation Area
- Designated Greenpace \*
- Urban Parks - Existing and Approved (TTC/CA Jurisdiction)
- Rural Areas (TTC/CA Jurisdiction)
- Urban Areas
- Road Area

**Notes:**  
\*Major streets of publicly owned land designated as Area of Greenpace

**Notawasaga Valley Conservation Authority**  
705-424-1479

**Lake Simcoe Region Conservation Authority**  
905-895-1281

**Credit Valley Conservation**  
905-670-1615

**Conservation Halton**  
5-336-1158

**Watersheds:**  
Don River Watershed  
Rouge River Watershed  
Highland Creek Watershed  
Etobicoke Creek Watershed  
Mimico Creek Watershed  
Humber River Watershed  
Caledon Watershed  
Duffins Creek Watershed  
Pickering Watershed  
Carruthers Creek Watershed

**Parks and Green Spaces:**  
Centennial Park  
Bayview Park  
Don Mills Park  
Humber Bay Park  
Mississauga Park  
Oakville Park  
Richmond Hill Park  
Scarborough Park  
Unionville Park  
Vaughan Park  
Windsor Park  
Yonge Park  
Zeebree Park

**Other Labels:**  
Aurora  
King City  
Markham  
North York  
Richmond Hill  
Unionville  
Vaughan  
Windsor  
Yonge  
Zeebree









*Member of Conservation Ontario*

5 Shoreham Drive  
Downsview, Ontario M3N 1S4  
tel: 416-661-6600 fax: 416-661-6898  
[www.trca.on.ca](http://www.trca.on.ca)

