

TORONTO & REGION
CONSERVATION AUTHORITY

IMPACT 2013

ANNUAL REPORT

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MESSAGE FROM THE CEO



In our 2013 annual report we feature the impact of TRCA’s work. However in 2013, it was really the weather that showed its impact on the Toronto region. On July 8, we endured one of the most intense thunderstorms in our history and then just in time for Christmas, a serious ice storm caused extensive damage to the tree canopy and electrical distribution infrastructure across the region. Both events were painful reminders of just how vulnerable our urban region is to severe weather events. The flood event also showed just how successful almost 70 years of conservation efforts have been. While there were thousands of basements flooded and the largest flood-related insurance claims in Canadian history, the system of valley and stream corridors that TRCA has worked so hard throughout its history to protect conveyed the heavy flows to Lake Ontario with relatively minor damage. Certainly there are many new erosion sites that will require repair, but most of the damage was incurred from overland flows and sewer surcharging rather than flooding associated with our major rivers. This was a direct result of concerted efforts to keep development out of flood prone areas over many decades.

Our report outlines some of our diverse achievements in watershed-based water management and regional greenspace and biodiversity. It also showcases our many community-based initiatives in pursuit of a more sustainable urban and near urban region.

We have made good progress in implementing our new strategic plan through the efforts of our talented staff and the support of our municipal and numerous other partners.

I hope you enjoy reading about our progress in the fundamentals of conservation programming that we have continued to build on since the beginning of the Authority. We also are happy to share our many new initiatives that will assist our member municipalities in continuing to become some of the most desirable communities in the world to live and work. We encourage you to go and explore our beautiful properties that extend from the shores of Lake Ontario to the top of the Oak Ridges Moraine. We know you will be amazed at the natural beauty and diversity that exists within our rapidly growing region. We would appreciate your comments and suggestions to help us in dealing with the many challenges of our times and in grasping the opportunities that exist to enrich The Living City.


Brian Denney
Chief Executive Officer

MESSAGE FROM THE CHAIR



Since its inception more than five decades ago, the positive impact of TRCA’s work on our communities has been unquestionably immense. From flood damage protection and benefits from the restoration of natural systems and conservation areas; to building understanding among young people about sustainability issues, to the growing adoption of sustainable practices by businesses, TRCA continues to help make big impacts that make the Toronto region a better place to live and work.

True to its legacy, TRCA is not prepared to rest on its laurels. On the contrary, in 2013, through the development of its 10-year strategic plan, TRCA renewed its commitment to work with municipal partners and others in its jurisdiction to improve its performance and to find new, even more impactful ways to protect and improve the wellbeing of our communities and the health of the environment. This strategic “road map,” *Building the Living City – 10 Year Strategic Plan 2013-2022*, prepared by hundreds of TRCA staff over the course of one year, drawing on the input of key stakeholders and subject experts outside the organization, sets the direction and the priorities for TRCA as it moves forward. Building on the successes and challenges of the past, while acknowledging emerging new realities and opportunities this plan serves as a foundation around which TRCA will work with its municipal partners to move ahead together.

As important as the strategic plan is in setting us on a good path, TRCA understands very well that real impact requires much more than words on a page. As documented in this report, TRCA made tangible strides toward the sustainability of our region through its work on the ground. The Ontario Climate Change Consortium, Sustainable Neighbourhood Action Plan (SNAP), our field data collection programs, shoreline restoration projects, planning and development review programs, and special events like “Paddle The Don” are just some examples of initiatives where TRCA’s work has made important, real impact.

I am honoured to Chair an organization that works so effectively and with such commitment to making positive change for the communities we serve. My heartfelt thanks goes to the staff who carried out the work with professional dedication. I also extend deep gratitude to my fellow TRCA board members for their relentless support and contribution. Finally, I wish to thank our member municipalities for their ongoing financial and technical support on which so much of TRCA’s good work depends.


Gerri Lynn O'Connor,
Chair

WATERSHED STUDIES AND STRATEGIES

TRCA has a mandated responsibility under the *Conservation Authorities Act* to conserve, restore, develop and properly manage the natural features, green resources and watersheds under our care. Comprehensive studies and strategies – our detailed watershed and waterfront plans, our cutting edge reports on climate change and extreme weather, and our ‘report cards’ on the health and sustainability of the nine watersheds across our jurisdiction – give us the in-depth knowledge and insight needed to do this vital job. Tree by tree, stream by stream and beach by beach we have the vision, the plans and the expertise needed to safeguard the natural heritage resources of the Greater Toronto Area.

435

metres of stream were naturalized at Secord Forest in the Duffins Creek headwaters, restoring the original cold water habit that our native fish species need to thrive

10,490

trees and shrubs and nearly 2,000 wildflowers plugs were planted in the Etobicoke and Mimico watersheds during 44 public planting, restoration and clean-up events

2,645

visitors to Rouge Park enjoyed 437 guided walks through Canada’s premier urban wilderness park led by our friendly and knowledgeable volunteer “ambassadors”

1,500+

members of the community, together with 30 environment groups and vendors, celebrated the Don River at Richmond Hill’s annual eco-festival, the Mill Pond Splash 2013

700+

people canoed downstream during Manulife’s 2013 Paddle the Don, gaining a new appreciation for the urban river while raising \$110,000 for watershed projects

2,258

volunteers participated in Rouge Park Stewardship Events in 2013, including tree plantings, bird counts, frog watches, invasive species removal, litter cleanups, our ‘hoot and howl’ and many more

4.9

hectares of new lakefront land were created as part of the Meadowcliffe Drive Erosion Control Project, providing the public with greater waterfront access and enhanced recreational opportunities

9

new Watershed Report Cards were produced, in partnership with Conservation Ontario and its 36 members, to assess and grade surface and groundwater quality, forest conditions and stormwater management within TRCA’s jurisdiction.

IMPACT SNAPSHOT:

We’re changing how cities are designed

Four silvery, cold-water creeks – Berczy, Bruce, Eckhardt and Robinson – burble through the farmlands and forests of northwest Markham, southward through the city’s spreading urban reaches, and into the Rouge River. Markham’s Official Plan has designated large sections of the four subwatersheds as a “Future Urban Area” that will eventually provide homes for some 40,000 people and jobs for 19,000 more. At one time, such development would have doomed these little creeks, seen them encased in concrete and transformed into sterile ditches to channel stormwater runoff away from the new streets and parking lots. Now, backed by the expert advice and hydrological data provided by TRCA staff, greenways will follow the course of the creeks and large swathes of rural countryside will be preserved. Our Watershed Plan for the Rouge River also identified potential erosion problems, flood vulnerable areas further downstream, and the presence of reddsides dace, a nationally endangered minnow species that warrants special protection. We are now actively participating in the subwatershed studies that will help guide urban growth in these sensitive ecosystems. The watershed management knowledge and expertise we bring to the table is changing the ways cities are designed.

WATER RISK MANAGEMENT

TRCA was created in the aftermath of one of the most devastating storms to crash through the GTA – 1954's deadly and destructive Hurricane Hazel. Today, our water risk management programs have expanded beyond flood control – although flood control is still a keystone of our operations – to include groundwater and source water protection, erosion monitoring and control, stormwater management, state-of-the-art water planning tools and a host of related technical services. Over the years, we have developed an intimate understanding of the hydrology, hydraulics and hydrogeology of the region. We are combining that scientific knowledge with some innovative engineering and emerging green infrastructure ideas to protect life and property, optimize the use of our water resources, and ensure a robust natural heritage system that will weather the great storms sure to come.

17,000

cubic metres of sediment were dredged from harbour entrances to provide safe navigation for boaters along Toronto's waterfront and then used to rebuild beaches and create new habitat

10

dams and 15 other flood control structures were operated, monitored and maintained throughout TRCA's jurisdiction to safeguard residents, homes, businesses and infrastructure downstream

8

years of development work culminated in the approval of the *Toronto and Region Source Protection Area Assessment Report*, listing the human, ecological and water resources across our entire jurisdiction

126

millimetres of rain were dumped on the GTA during a powerful rainstorm on July 8, 2013, but newer areas protected by TRCA's flood line mapping and stormwater management programs suffered little damage

12

vulnerable buildings were removed from the regional flood inundation area as the three-year Yonge/York Mills Channel Rehabilitation was completed

100+

representatives from municipalities, school boards, local and provincial police and other agencies attended the 5th annual "Floods Happen" workshop hosted by TRCA at Black Creek Pioneer Village on April 9, 2013

1.6 million

cubic meters of water were contained within TRCA's G. Ross Lord flood control reservoir during the peak of the July 8 storm, reducing downstream flooding and assisting rescue and recovery activities

23

warning messages, including vital watershed condition statements, flood watches and warnings, were issued by our Flood Forecasting and Warning Program during 2013

120+

gauging stations, maintained and operated under our Hydrometrics Program, measured stream flow, precipitation, snow pack, water quality and climate for six jurisdictions across the GTA

IMPACT SNAPSHOTS:

Good planning is as important as strong dams in preventing flood damage

Climate change is increasing the number of extreme storms that slash across Southern Ontario each year, raising the risk of local flooding, sewer backups, erosion damage and other costly disruptions. To protect residents, public and private property, and the natural environment, TRCA has used its sophisticated hydrologic models to produce some 500 detailed flood line maps that plot the projected impacts of the most severe "100-year storms" in all the watersheds across our jurisdiction. In 2013, we continued to advance the science of flood mapping by incorporating remote-sensing LiDAR technology and 2D flood modeling software to chart vulnerable areas in Peel, Toronto and York regions. Working closely with our municipal partners, this mapping expertise is helping to ensure that future urban development is setback safely away from flood hazard areas. As a result, new development is greener than it has ever been.

Curbing floods the natural way

Ambitious plans to naturalize the mouth of the Don River would allow the development of Toronto's Port Lands. A new, low flow river channel will loop through recreated wetlands and meadow marsh communities before emptying into Toronto harbour. In addition, the Keating Channel and a new wetland spillway would divert flood waters following major storms safely around and away from the planned development on the Port Lands. Sediment removal and ice protection features are also built into the plans. In total, the Don Mouth Naturalization Project will protect more than 850 buildings and over 290 hectares of land from the risk of future floods. It is estimated that the project will increase the value of the properties from \$20 million to \$470 million (in 2010 dollars) once construction is complete.

REGIONAL BIODIVERSITY

There are over 200 “species of concern” – plants and animals at risk of disappearing from our area – hanging on in isolated pockets across the jurisdiction of TRCA. They are the proverbial ‘canaries in the coal mine,’ an indication of the environmental health of the region and an illustration of how it takes a lot of care to prevent urbanization from slowly squeezing the biodiversity out of an ecosystem. The preservation and restoration of our formerly rich biodiversity lies at the heart of most of our high profile programs or activities. By restoring valleys, streams, shorelines and wetlands we are preserving biodiversity. By removing invasive species, planting native trees and shrubs, and maintaining water quality and stream flow we are preserving biodiversity. By better managing our forests, soils and other green resources, we are preserving biodiversity. Whatever we do to safeguard the scarlet tanager, the spring peeper or the little snail darter makes our shared environment, stronger, more resilient and healthier for us all.



95.7

hectares of wetland, stream and terrestrial habitat were restored in 2013, representing a total area 75-times larger than Nathan Phillips Square!

2

hours is the time it would take to walk the 10,124 metres of river, stream and waterfront shoreline we restored in 2013, if those naturalization projects were lined up end-to-end-to-end

70+

businesses, community groups and NGOs worked together to improve our programs promoting green infrastructure, such as tree-lined streets, urban wetlands and gardens, green roofs and permeable pavements

53,992

fish were processed and important data recorded as part of our environmental monitoring programs, including 301 fish tagged with acoustic transmitters and then monitored and tracked

350

essential habitat structures were installed, including boxes, poles and rafts for nesting birds, fallen logs for salamanders, bee boxes for pollinators, and shoals, cribs and rocky hooks for spawning fish

10

hectares of meadow habitat are recreated and another eight hectares prepared for seeding along the Scarborough Centre Butterfly Trail in a hydro corridor that crosses the Highland Creek watershed

207

truckloads of sediments were cleaned out of three stormwater management ponds in Scarborough under a new partnership with the City of Toronto, reducing the risk of downstream flooding

7,504

migrating birds from as far away as Brazil and the High Arctic were banded by a dedicated crew of volunteers, during the 10th year of migration monitoring at the Bird Research Station in Tommy Thompson Park

88,000

plants, mammals, birds, amphibians, reptiles, fish and insects were identified and invaluable data collected on their abundance, habitat and range to support future policy and planning

IMPACT SNAPSHOTS:

Field data collected by volunteer naturalists guide future conservation programs

Ten times a year, teams of volunteer naturalists visit 56 carefully-chosen monitoring sites in meadows and forests, along river banks and shorelines looking for key indicator species to help us gauge “species richness” across the region. Since 2002, the data collected through TRCA’s Terrestrial Volunteer Monitoring Program has guided our conservation land and watershed management activities. We also share it with our partner municipalities, agencies, organizations and local landowners to identify and then reverse the negative impacts of urban development. *Terrestrial Biodiversity in the Toronto Region 2003-2012*, published by TRCA in 2013, summarized the first decade of monitoring data and allowed us, for the first time, to make comparisons of the ecological health of the watersheds in our jurisdiction. Armed with hard numbers on the abundance and range of key mammal, fish and plant species, we are now tracking the success of on-going projects and deciding where to focus our future efforts.

Sponsors, funders and partners support innovative greening projects

Each year, TRCA launches scores of remediation, restoration, research and education projects, and very few of them would ‘get off the ground’ without the support of our public and private sector partners. Here are just a couple of examples from 2013:

- **Coca Cola Canada** funded the transformation of a former industrial dumping site at Tommy Thompson Park into a vibrant 9.3 hectare coastal wetland complex. The project isolates contaminated sediments, improves water quality, provides habitat for fish and wildlife, and offers new greenspace for nature-based activities.
- Generous funding from the **W. Garfield Weston Foundation** is helping build the Scarborough Centre Butterfly Trail along a hydro corridor running through the Highland Creek watershed. Ten hectares have been planted with native wildflowers, grasses and shrubs, while another eight have been prepared for seeding. The project provides natural meadow habitat for local and migrating wildlife, improves the natural beauty of the trail system and eliminates the need to mow the corridor several times a year.
- **Cooke Lab at Carleton University**, with funding from the Natural Sciences and Engineering Research Council of Canada and the Great Lakes Sustainability Fund, has tagged more than 300 fish in Toronto harbour with high-tech acoustic transmitters. Using telemetry stations, the researchers are monitoring the movements of key species as they feed and spawn through the year. The results of this joint study with Carleton University and TRCA will help us evaluate the success of habitat building activities and show us where best to invest our future restoration dollars.

LAND SECUREMENT & MANAGEMENT

It's all about 'the land.' Every year, we add key parcels of sensitive and ecologically important land to our growing inventory. Then, we diligently monitor, audit and manage these lands. We reduce risks and improve safety, maintaining some trails, closing others and cutting out hazard trees. We repair fences and resolve encroachments from neighbouring properties. We guard against vandalism, illegal dumping, trespassing and poaching. Finally, and only where appropriate, we eventually develop some of our lands into purposed parks, urban farms and other environmentally sustainable purposes. By securing and maintaining the land, we are helping to ensure that: the streams run clean, cold and clear; that the air stays fresh; that habitat and biodiversity is conserved; and that all the other environmental amenities of urban greenspace are preserved in perpetuity.

64

hectares of environmentally significant land were acquired by TRCA in 2013, primarily through development conveyance requirements, raising our total holdings of natural heritage lands to 17,947 hectares

1,078

metres of boardwalk were built, allowing visitors to enjoy perennially wet areas on our Conservation Lands while protecting sensitive plants and habitat, and allowing water to move freely

3,181

hectares of Conservation Lands were regularly inspected and audited, with the findings used to support both Conservation Land Planning Projects and land management actions

41

unauthorized encroachments into Conservation Lands were documented, including several construction and major landscaping projects, that threaten the health and ecological integrity of these lands

172

individual archaeological assessments were conducted over 39 hectares, resulting in the addition of six new sites to the archaeological record and the collection of almost 20,000 artifacts

8,840

hectares of land held by TRCA in the regions of Peel and York that were actively managed under the Land Care program, which sets the standard for "the best possible care"

52+

hectares of TRCA land were allocated for local food production, producing more than 135,000 kilograms of fruits, vegetables and grains in 2013, while providing 31 new farmers with access to prime farmland

IMPACT SNAPSHOTS: Strategic land acquisitions pay long-term benefits

Under TRCA's Greenlands Acquisition Project 2011-2015, we have increased our land holdings by 1,840 acres representing a full 74 per cent of our 2,500-acre project goal. These acquisitions have permitted us to expand community access to greenspace, establish strategic trail and ecological connections, ensure clean and abundant groundwater supplies, and protect ecologically sensitive lands within our nine watersheds. For example, through a partnership with Infrastructure Ontario at our Petticoat Creek Conservation Area, TRCA was able to acquire, at nominal cost, 26 acres of land within the established flood plain. This will ensure the protection and enhancement of these environmentally significant lands, as well as the long-term safety of neighbouring residents. In addition, we were able to acquire more than 8 acres of vitally important Lake Ontario waterfront lands, as a result of our involvement in the Frenchman's Bay Harbour Entrance Reconstruction Project.

Those who ignore the past are doomed to pave it over and lose it forever

TRCA's strong focus on cultural programs makes us unique amongst conservation authorities. Each year, our in-house archaeological resource management unit conducts more than 100 archaeological assessments and manages the resources discovered through these projects. To date, we've assessed 1,223 hectares, or seven per cent, of TRCA's owned or managed lands and uncovered 475 archaeological sites dating back as far as 12,000-year-old Aboriginal campsites and trails and right up into the European settlements of the 19th century. In 2013, TRCA prepared an Archaeological Master Plan, a comprehensive reference that documents all the archaeological sites we've identified and makes recommendations for their proper management. In concert with our cultural heritage studies, Aboriginal engagement and education programs, we are peeling back the layers of our fast-changing landscape to peek at the people, events, and communities that shaped our region.

TOURISM & RECREATION

We know there is strong, scientifically verified connection between health, well-being and the amount of time spent outdoors in a green, natural environment. We see it every day. We see it the smiles of tired children trooping back onto their school bus after a busy day at the Kortright Centre. We feel it in the excitement of a birdwatcher spotting a rare migrant that's stopped over in Tommy Thompson Park. And we hear it in the contented sigh of a new mother stretching her feet out in the grass of a local parkette while her baby sleeps quietly beside her. Not to mention the hiking, fishing, swimming, picnicking, camping, mountain biking in the summer and cross-country skiing and snowshoeing in the winter that visitors enjoy on TRCA lands. We also know this nature-human connection works both ways. The joy, appreciation and environmental knowledge imparted by our outdoor recreation and nature-based tourism programs is paid back a hundred-fold as local residents, community groups and businesses come back to join us in our work.



Just 8.2

kilograms of 'active ingredient' pesticides were used on Bathurst Glen Golf Course, less than 10 per cent of the amount typically used on other courses that don't practise integrated pest management

134,000

visitors from across the GTA and around the world passed through the gates of historic Black Creek Pioneer Village in 2013, a boost over the total attendance numbers of the last few years

6.1

kilometres of new trails were developed by Conservation Land staff, allowing the community safer access to our greenspaces while protecting their fragile natural heritage features

200

kilometres of trail were actively maintained, encroaching vegetation pruned or mowed, and minor surface problems repaired in the Granger Greenway, Bolton Resource Management Tract, East Duffins Headwaters, Altona Forest and Greenwood Conservation Lands

5,600

eager climbers tackled one of Heart Lake's eight new Treetop Trekking courses, including the "big zip" over the lake, in the three months following their official opening on August 1, 2013

40

new Canadians took the citizenship oath on Canada Day 2013 at Black Creek Pioneer Village with special guest speaker Justin Trudeau looking on

IMPACT SNAPSHOT:

Building multicultural connections with new Canadians

TRCA's jurisdiction encompasses the most culturally and ethnically diverse region of the country, with more than half of the population born outside of Canada. Over the years, these new Canadians have become frequent visitors to our facilities and greenspaces. In return, we are happy to introduce them to some of Canada's favourite outdoor pastimes.

- In 2013, Bathurst Glen Golf Course introduced a group of 60 new Canadians to the great game of golf. With help from instructors, participants were taught golf etiquette, learned the basics of the swing, and had an opportunity to practise putting and hit balls on the driving range.
- Parks Canada's 'Learn to Camp' program, held at Glen Rouge Campground in July, taught new Canadians and young families how to plan and enjoy safe and successful camping trips. The event was very popular, and follow-up events were held at Glen Rouge and Albion Hills.
- Both Albion Hills and Heart Lake Conservation Areas hosted a series of 'Learn to Canoe' workshops. Organized by our Outreach Education group, with support from Mountain Equipment Co-op, participants learned the basics of canoeing, before donning life jackets and paddling out for the first time.

PLANNING & DEVELOPMENT REVIEW

The planning and construction of new residential communities and urban business centres is burgeoning throughout the Toronto region, and TRCA's review teams are committed to ensuring that the green foundations for all these new ventures remain healthy and resilient. Since the landscape is changing rapidly with growth, our technical teams lead miles of field assessment walks to determine possible impacts on wetlands, shorelines and valleylands. Our planners, ecologists and engineers spend hours negotiating state-of-the-art water management and natural heritage solutions for protection and restoration to enhance development projects— including new greenways, trails and promenades, scenic riverways and parks.

We also search out opportunities for ecological improvements, beautification and flood/river remediation while reviewing the roads and infrastructure of roads and services that will connect these new neighbourhoods. Whether building consensus in a host of federal, provincial or municipal committees or defending policy and technical imperatives in court, the planning and development division upholds the highest standards in sustainability. We are the specialists creating the next generation of urban form, public safety, and renewal within neighbourhoods.

70,000

people will eventually live in the Seaton project, a vibrant new development in the eastern part of the GTA, planned around a robust natural heritage system thanks to the efforts of TRCA planners, ecologists and engineers

2,000+

new planning applications and permits were processed in 2013, while 970 permits, 271 minor works, 127 EA permits and 131 violations were issued

18

Growth Area studies were in progress across the 905 involving comprehensive environmental and planning studies to determine impacts and reconcile urban form

11

development revitalization studies for flood vulnerable areas were updated, with the input and expertise of TRCA Policy staff and our Development Review team, including new development directions for the Lower Don, Woodbridge, Toronto, downtown Brampton and Lake Wilcox

3,857

construction permit inspections were conducted to determine compliance and environmental management adherence on active development sites.

In 2013

we completed final consultation on TRCA's Living City Policies document, which will guide planning and development in our watersheds, using state of the art science and urban environmental practices

6

talented photographers contributed to Nine Rivers City, an outstanding photographic showcase of the waterways within the TRCA jurisdiction, opened at Harbourfront Centre in June 2013

IMPACT SNAPSHOT: Maintaining the Ideals of the Living City

With seven Official Plans being updated and 18 new Growth Areas being planned across TRCA's jurisdiction, the demand for our environmental impact review and development approval services has been enormous. Cumulatively, the environmental impacts could be severe as these communities build out, altering the hydrologic regime in the mid and upper sectors of our watersheds and affecting flow rates and water quality right down to the Lakeshore. Using the latest geotechnical, hydrogeologic and engineering models, our teams have collaborated with developers and municipal officials to bring these technically complex applications proposals in line with The Living City standards.

These integrated solutions have been incorporated in the communities of **Countryside** in Brampton, and the new village developments in **Mayfield**. 2013 was a pivotal year for the new **Seaton community**, as TRCA lead intense efforts through OMB mediation to bring the project through rigorous environmental policy scrutiny and environmental site design.

31

OMB hearings and an additional eight Official Plan appeals required the special expertise of TRCA, which mediated and negotiated for conservation-related interests, such as more greenspace and protection of flood vulnerable areas

Degraded streams and lost river corridors have been brought into renewal and restoration projects through intensification projects and urban centres. These efforts have crystallized in the **Block 61** community in Vaughan where the ecological design of a new stream corridor has brought back flood conveyance and natural heritage functions as part of an attractive open space system. An exciting new urban river corridor has been evolving in the **Vaughan Metropolitan Centre**, where the Black Creek has been re-designed as an urban amenity within the intensification of the new city centre.

Sophisticated green technologies are beginning to be designed as main stream redevelopment as demonstrated in the beautiful project overlooking the Don ravine in Toronto for the **Sisters of St. Joseph**. This assisted living facility, chapel and hospital project shows the environmental commitment of the Sisters with the inclusion of site naturalization and ecological gardens, heritage building rehabilitation, geothermal heating and water conservation.

EDUCATION & OUTREACH

Learning is a life-long passion, so we provide education, outreach and training opportunities for people of all ages and abilities. We have programs that support the early development of pre-school aged children and programs for students from priority communities in urban centres. We offer overnight trips to our three field centres to learn about sustainable communities, biodiversity and healthy rivers. There are day trips to the Kortright Centre to learn about nature and renewable energy and to Black Creek Pioneer Village to experience our pioneer heritage. And there are outreach education efforts that bring our experts right into the classroom. Nor have we forgotten the adults. We offer: professional training programs in the fields of emerging technology and renewable energy; work experience opportunities for internationally trained professionals; and professional development workshops and sessions for teachers across Canada to better understand complex environmental and sustainability issues.



1,000+

students participated in full-day nature programs at the Kortright Centre for Conservation thanks to the Kortright Bus Grant Program that helps cover the transportation costs of class trips

10,965

members of the public got a sweet taste of spring at TRCA's Sugarbush Maple Syrup Festivals held at the Kortright Centre for Conservation and at Bruce's Mill Conservation Area

47,000

students, from pre-schoolers to adult learners, traveled back in time at Black Creek Pioneer Village in a series of interactive programs that celebrate Ontario's cultural and environmental heritage

3,036

enthusiastic students living in some of the province's most disadvantaged communities participated in TRCA's Integrated Learning Programs, where in-school classroom learning is combined with an overnight trip to one of Ontario's leading outdoor education centres

155

teachers learned about the science and ecology of the threatened monarch butterfly in a series of hands-on workshops hosted by TRCA, the Canadian arm of the Monarch Teacher Network, and will take what they've learned back into classrooms across the province

24,925

students had nature delivered right to their classrooms through our mobile Outreach Education programs, including Watershed on Wheels, the Aquatic Plants Program and the Yellow Fish Road storm drain marking program

102

internationally trained professionals gained invaluable technical experience, job readiness training and mentoring through the support of TRCA's Professional Access Into Employment (PAIE) Program

20

training workshops attracted more than 1,150 attendees to learn about innovative stormwater management, low-impact development, renewable energy, and erosion and sediment control

IMPACT SNAPSHOTS:

EcoSchools train the next generation of environmentally aware citizens

Under a joint initiative between TRCA, Ontario EcoSchools, Peel Region and its school boards, over 50 per cent of the schools in Peel Region were certified as Ontario EcoSchools in 2013. The environmental education and certification program for grades K-12 is designed to minimize waste, conserve energy, green school grounds and create opportunities for active environmental citizenship. For example, students and staff at 118 Peel EcoSchools worked to reduce food-related waste through "waste-free" lunch days, promoting refillables and reusables, composting and recycling. They also delivered 110 schoolyard greening projects, including planting trees to provide shade, cool schools and protect students from UV radiation. In collaboration with our project partners, TRCA engaged 229 teachers in professional development sessions that empowered them as EcoTeam leaders and EcoSchools ambassadors within their school communities.

Internationally trained professionals help green Canada's economy

TRCA's Professional Access Into Employment (PAIE) program offers a hand-up to internationally trained professionals through the technical and job-readiness training and mentoring support we offer. In 2013, a total of 102 participants took advantage of PAIE's services. Some 90 per cent were able to gain employment in their respective fields, while 60 professionals obtained the licensing and/or certification required to move forward. These achievements reflect our commitment to helping newcomers make a contribution to Canada, while responding to skills shortages and sector-specific labour markets. The support of a vast network of employers has been critical to the program's continued success, offering both internships and permanent placements. Professional associations and agencies have also played an important role in recruitment and provided training and workshops. In turn we have worked closely with a number of agencies on programs and strategies to increase opportunities for skilled newcomers and to allow employers to reap the benefits that diversity in the workplace can offer.

SUSTAINABLE COMMUNITIES

An interconnected network of sustainable communities nestled amidst a stable and well-functioning green ecosystem is the basis of The Living City ideal. Through our Sustainable Technologies Evaluation Program (STEP), Sustainable Neighbourhood Retrofit Action Plan (SNAP), Partners in Project Green and other community engagement programs we are crafting and passing on the tools needed to build and maintain sustainable communities. In 2013, we supported low impact development techniques to divert runoff and manage stormwater. We monitored and tested innovative green technologies to build consumer confidence in renewable energy and clean-tech alternatives. We quantified economic costs and benefits to build the business case for The Living City, and incorporated the principles of social equity and environmental responsibility in all of our community engagement programs within our jurisdiction. Business by business and home by home, we are helping our municipal partners to create sustainable neighbourhoods and integrated communities across the region.



4

detailed monitoring evaluations assessed low-impact development stormwater management technologies that infiltrate, filter, evaporate or detain runoff to restore natural landscape functions and prevent pollution

1,580

residents participated in 32 different events, including the Pollinator Meadowscape Project in Ajax and Environmental Stewardship Pickering, as part of our Stewardship program in Durham Region

5,921,887

cubic metres of natural gas was conserved in 2013 by 31 companies that are part of Partners in Project Green

12

companies within the Pearson Eco-Business Zone collectively reduced water consumption by 1,241,625 litres per day

94

home consultations were conducted in the first six months of the Harvest the Rain program in the Black Creek SNAP, resulting in the installation of 166 rain barrels, the planting of 68 trees and the disconnection of 16 downspouts

250

interested homeowners in the Lake Wilcox SNAP took part in our Eco-Landscaping program, resulting in eight full front yard makeovers, numerous trees planted and the installation of raingardens or permeable paving to manage rainwater

203

low flow toilets were installed, 19 energy audits completed, 40 trees planted and 40 fusion gardens begun as part the County Court SNAP's Green Home program

700+

new volunteers were added to the Environmental Volunteer Network(EVN), increasing our total pool of volunteers to over 4,000; each year these volunteers contribute over 30,000 hours of service at TRCA

30

volunteer opportunities published on the EVN website attracted more than 1,000 volunteers – from students to professionals and newcomers to retirees – to participate in various projects and other events

6 to 7

hectares of new wetlands, more than 1 km of new beach and three new rocky headlands, as well as new meadow, upland forest and swamp habitats were planned as part the Lakeview Waterfront Connection project

IMPACT SNAPSHOT:

STEP helps prove the advantages of green technology

New technologies are introduced into the marketplace each year, offering innovative solutions for improving the environment and our quality of life. However, many are overlooked because consumers lack reliable, independent information on their performance and cost effectiveness. TRCA's Sustainable Technologies Evaluation Program (STEP) helps fill this gap by providing the monitoring data and support tools needed to reduce risks and build confidence in new green technologies. In 2013, our staff were busier than ever, completing detailed monitoring evaluations on low-impact development (LID) stormwater management technologies, as well as ways to mitigate the thermal warming effects of ponds and wetlands. We also worked with the University of Toronto to develop detailed life cycle costs and case study examples for common LID practices. On the renewable energy side, we worked with our partners to maximize the performance of small wind turbines and to compare the efficiencies of two ground and air source heat pump systems installed in the Archetype Sustainable Houses at The Living City Campus.

CORPORATE SERVICES

TRCA is a diverse and dynamic organization whose contributions to the protection and restoration of natural systems and the advancement of community sustainability involve a broad range of interests and stakeholders. Corporate services ensure that the organization as a whole, together with all its component service areas, have the financial, administrative and technical resources needed to optimize performance and realize the goals of our strategic plan. They also ensure that TRCA's work is aligned with the priorities of the Authority and leverages community assets. By facilitating and nurturing multi-partner collaborations, which include TRCA staff, its municipal partners, private and non-governmental organizations and government agencies, TRCA is continually building capacity to enhance performance and build The Living City.

Over \$100,000

in matching funding was acquired from the Federal Community Infrastructure Improvement Fund to support the installation of conduit and fibre optic cabling to various TRCA office locations

400 +

TRCA staff provided input to the development of TRCA's 10-year strategic plan, *Building The Living City*

24%

decrease of energy intensity - from 71.64 GJ per Full Time Equivalent (FTE) in 2005 to 54.59 GJ per FTE in 2013 - was achieved through installation of more energy efficient technologies, lighting retrofits and numerous other small projects across the organization

2.79

metric tonnes (MT) per FTE was TRCA's carbon intensity in 2013 – a significant decrease from 5.24 MT per FTE in 2005. This is due to reductions in oil consumption, purchase of green electricity and green gas, and the provincial government's efforts to reduce the carbon intensity of the electricity grid

2,102,986

hits were registered on the TRCA website and a total of 6,724,471 pages were viewed

1,000 +

individual Geomatics Support Requests completed ranging from simple map production to complex spatial analyses, supporting staff reports, research projects and TRCA programs

5,000 +

flora and fauna data sets collected and over 1,400 new ecological land classification polygons were digitized to provide technical support and data management

180

people attended and listened to 28 speakers at the Ontario Climate Consortium's first annual Climate Change Symposium in May 2013 to learn about focused research and action underway in the GTA and across the province

IMPACT SNAPSHOTS:

Building capacity and performance through collaboration

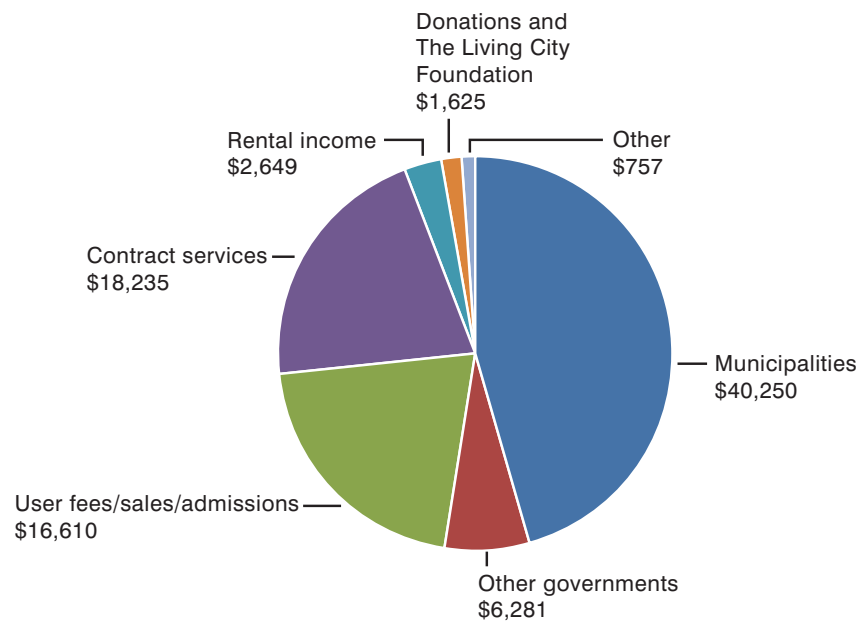
In 2013 TRCA completed its 10-year strategic plan, *Building The Living City*, which adopts and endorses The Living City vision. Input and ideas were gathered from TRCA staff at all levels across the organization as well as from representatives of key community stakeholders to create a strategic roadmap that considers a broad range of knowledge and perspectives. By engaging hundreds of TRCA staff in setting the future direction of their organization, the process built morale and will boost future performance of the organization.

TRCA is working to meet the "new realities" of the next ten years

Over the next 10 years, TRCA will plan and implement programs to accommodate and address the new realities shaping the future of the region. These include a

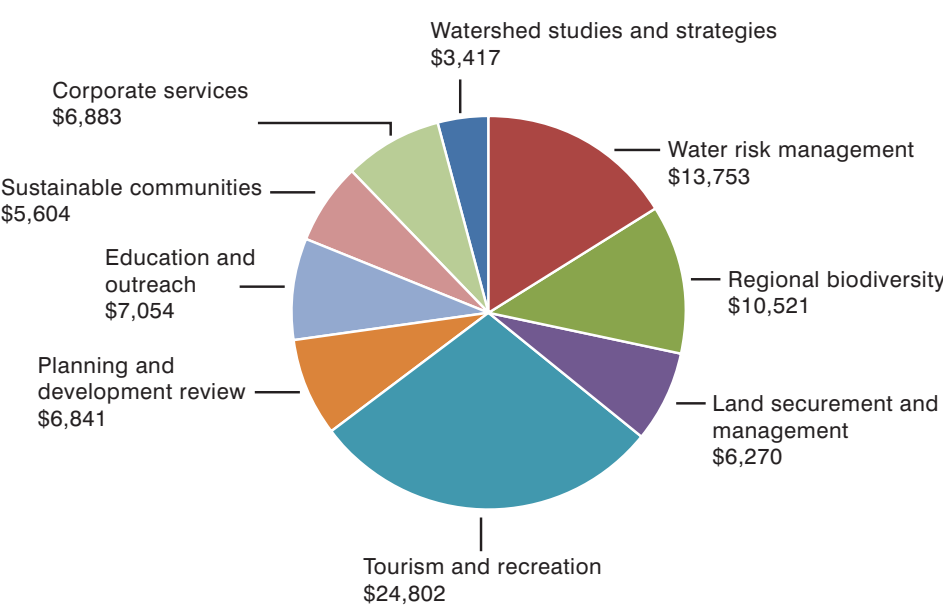
growing and evolving population, urban expansion and, perhaps the most difficult challenge, the impacts of climate change. This is the driving motivator behind TRCA's ongoing participation in the Ontario Climate Consortium (OCC) – a collective of leading scientists, researchers and practitioners from universities and government agencies across Ontario focused on addressing climate change issues pertinent to the province. With support from the Region of Peel and a grant from the Great Lakes Integrated Science Assessment Program, TRCA and OCC were able to provide a detailed climate change analysis of the whole region, as well as to develop climate change risk studies focused on Port Credit and Caledon. The capacity to deliver credible, science-based risk assessment at the local scale is vital to the future wellbeing of our communities, and was made possible only through a well-managed collaborative effort among diverse individuals and organizations.

REVENUE (in thousands of dollars)



TOTAL = \$86,407,000

EXPENDITURES (in thousands of dollars)



TOTAL = \$85,145,000

Not reflected above are TRCA’s expenditures on tangible capital assets, which amounted to \$8,039,000 in 2013. Please refer to TRCA’s audited financial statements which are available online.

