

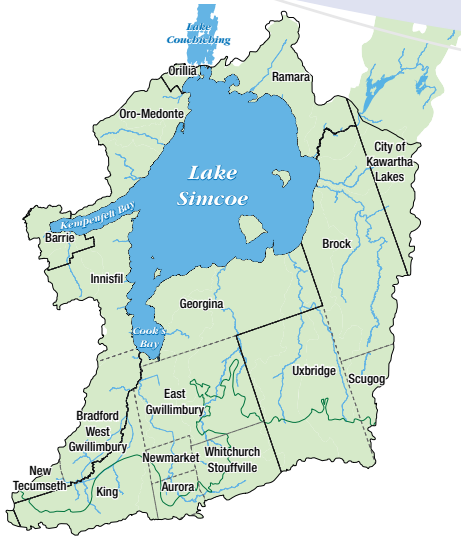


2007 Annual Report

- Science & Research
- Protection & Restoration
- Education & Outreach

Leadership in times of change

2007 LSRCA Board Members



York Region (at Large)
Mayor James Young

York Region (Georgina)
Mayor Robert Grossi

York Region (East Gwillimbury)
Councillor Virginia Hackson (Chair)

York Region (Newmarket)
Regional Councillor John Taylor

York Region (Aurora)
Councillor Evelina MacEachern

York Region (King)
Councillor Jack Rupke

York Region (Whitchurch-Stouffville)
Councillor Ken Ferdinands

Durham Region (Scugog)
Councillor Bobbie Drew (Vice-Chair)

Durham Region (Brock)
Regional Councillor John Grant

Durham Region (Uxbridge)
Regional Councillor Howie Herrema

City of Kawartha Lakes
Councillor Glenn Campbell

Town of Innisfil
Deputy Mayor Gord Wauchope (Councillor Lynn Dollin represented until August 2007)

Working in the environmental sector, we come to accept change as a constant. It affects the environment we live in, and also the environment we work in. It is something that we expect, something we meet with confidence in the importance of our work, and with creative solutions for the challenges we face.

The year 2007 brought new levels of attention to our watershed. The provincial government announced legislation, and proposed a regulation as a step toward a Lake Simcoe Protection Act. The federal government dedicated \$12 million to help restore the lake, and established an advisory committee of watershed stakeholders. And internationally, our work in the watershed was showcased on the worldwide scientific stage as a finalist in the esteemed Thiess Riverprize in Australia.

There are changes ahead that will continue to alter the work we do. Global climate change will in time affect the very nature of Lake Simcoe and our watershed. The growing concern for the health of the lake and its place in our environmental, economic and recreational lives will create new forms of engagement among government, business and public partners.

Change is not new, but the details are. Success will mean getting the details right – the proper science, the most effective actions for restoration, the education of our youth, and communication with our partners.

We have detailed knowledge of the watershed's problems. We understand the lake's problems. We know that with hard work, balanced, practical planning and engaged partnerships we can protect and restore the environment we share and the lake we love. We know because, as this report demonstrates, we are busy doing it.

Virginia Hackson
Councillor York Region
(East Gwillimbury) Chair

Gayle Wood
Chief Administrative Officer/
Secretary-Treasurer



Town of Bradford West Gwillimbury
Councillor John McCallum

Town of New Tecumseth
Councillor Barbara Huson

City of Barrie
Councillor Alex Nuttall

City of Barrie, Citizen Representative
Eric Bull

Township of Oro-Medonte
Councillor Sandy Agnew

Township of Ramara
Councillor John O'Donnell

City of Orillia
Mayor Ron Stevens (Ex-Officio)

Honourary Lifetime Member
George R. Richardson
(deceased November 11, 2007)

Protection & Restoration

Flood Forecasting – Warning Network

More intensive and frequent flooding has occurred in recent years, likely influenced by climate change. Barrie experienced a 1-in-100-year (or 1%) storm event in 2005 and Newmarket another in 2006. Through its automated communications system, the conservation authority distributed nine flood bulletins and warnings to area municipalities, school boards, media, police and neighbouring conservation authorities this year.



Forestry Services

Public awareness of reforestation and tree planting programs on private lands was promoted through landowner outreach, community meetings and new marketing materials. Nine community tree plantings on public lands were organized or assisted by the conservation authority in Newmarket, Aurora, East Gwillimbury, Whitchurch-Stouffville and Barrie.

Under its agreement with the Regional Municipality of Durham, the conservation authority maintained six regional forest tracts within the Lake Simcoe watershed. Timber harvesting, trail maintenance, interpretative forest tours, and a forest-user survey were conducted in the main tract. The conservation authority assisted the Regional Municipality of York forestry staff with a number of tree planting projects and, as a partner in the York Natural Planting Partnership, planted 52,000 trees and shrubs in the region's portion of the Lake Simcoe watershed. In a new funding partnership with Simcoe County, the LSRCA planted over 2,300 native trees and shrubs on private properties. This pilot program also increased landowner outreach across the county.

Lake Simcoe Water Quality Improvement Program (LSWQIP)



Under the Lake Simcoe Water Quality Improvement Program the conservation authority worked with private landowners and municipalities to complete 125 protection and restoration projects in 2007. Landowner contributions made up over \$625,000 of the more than \$900,000 project value. New project categories and increases to several funding levels improved the program's design and uptake.

The conservation authority provided technical expertise to help the City of Barrie complete the restoration of fish habitat and green space for local residents at the mouth of Kidd's Creek on Lake Simcoe. Project funding was provided by the Lake Simcoe Conservation Foundation and its donors, the City of Barrie and the conservation authority.

A partnership between the conservation authority and the Lake Simcoe Conservation Foundation launched the East Holland River Clean Up to raise a total of \$17 million for the work needed to clean up the Lake Simcoe watershed's most degraded sub-watershed. By the end of the year, 49 projects were completed or in development.

The LSRCA and the Town of Whitchurch-Stouffville initiated the Musselman's Lake Stewardship Plan. Community workshops in August and November shared information on the LSRCA's monitoring activities and stewardship opportunities and collected concerns and suggested solutions from local residents and business owners. The plan is to be completed in 2008.



Lake Simcoe Environmental Management Strategy (LSEMS)

The conservation authority continued its leadership of the Lake Simcoe Environmental Management Strategy as Phase III of the strategy draws to a close. The governance model was reviewed by a new Working Group consisting of current LSEMS partners, concerned community groups and business representatives, with recommendations to the Steering Committee.

A Progress Report and Summary reported LSEMS' achievements during its Phase III (2001-2007).

A draft of the comprehensive Watershed Basin-Wide Plan was developed and reviewed with the Lake Simcoe Environmental Management Strategy partners and municipal stakeholders

Natural Heritage Land Use and Mapping

The conservation authority's work on the Natural Heritage System for the watershed provides a consistent method to identify areas needing protection and restoration. In 2007, this mapping was refined and verified by site visits. The Town of East Gwillimbury used the improved mapping to develop land use strategies for its official plan. The conservation authority began using this information to monitor and investigate species at risk and invasive species within the watershed.

Natural Heritage System Land Securement

Almost 45 ha (110 acres) of land was secured for protection. With support from the Regional Municipality of York, the LSRCA added 13.8 ha (34 acres) of ecologically sensitive lands in Georgina to its land holdings. In Oro-Medonte the conservation authority, with funding from a donation, purchased approximately 1 ha (2 acres) of pristine Lake Simcoe shoreline. Through the support of the Township of Uxbridge, the Regional Municipality of Durham, the Nature Conservancy of Canada and the Ontario Heritage Trust three, properties, 29.9 ha in Durham Region's Beaver River wetland complex, were acquired by the conservation authority.

Sub-watershed Planning

Completed in 2007, the Lake Simcoe Natural Heritage System provides several valuable tools for municipalities and the conservation authority to use in identifying and protecting environmental features across the watershed. The Geomorphic Assessment Report describes and assesses geology on the sub-watershed scale. Improvements to Ecological Land Classification mapping provide a more accurate picture of current land use and vegetative cover.

Increased monitoring of fish, streambed organisms, and surface and groundwater provided enhanced information about water quality and quantity. Hydrologic and hydraulic studies of Hawkestone Creek and the Beaver River provided a detailed understanding of the characteristics of the watercourses. Geologic investigation and modeling improved the mapping of York Region's groundwater recharge and discharge areas.

Protection & Restoration

Conservation Area Management Plans

Conservation area users were surveyed to gather insight into how and why people visit conservation areas and their level of satisfaction with their experience. This will inform the development of Conservation Area Management Plans. Plans for Scanlon Creek north of Bradford and Sheppard's Bush in Aurora will be completed in 2008 to guide the management, development and operations of the conservation areas.

Water Control Structures

Safety reviews of the Pepperlaw and Fairy Lake dams were completed. In partnership with the Ontario Ministry of Natural Resources and the Town of Newmarket, a contractor was selected and the dredging of Fairy Lake begun. This work will improve the lake's ability to control floodwaters, enhance water quality downstream in the East Holland River and create wetland habitat for wildlife.



Conservation Authorities Moraine Coalition

In cooperation with eight other conservation authorities in the Conservation Authorities Moraine Coalition, the LSRCA contributed toward the YPDT Study (see Ground Water Management). The study supports stewardship work to protect and restore the water resources along the Oak Ridges Moraine, where many of Lake Simcoe's southern tributaries start. The conservation authority completed four restoration and reforestation projects on the Oak Ridges Moraine.

Environmental Planning & Ontario Regulation 179/06

The LSRCA's planning program is carried out under various legislation including the *Planning Act*, the *Conservation Authorities Act (and Ontario Regulation 179/06)*, the *Environmental Assessment Act*, the *Greenbelt Act*, and the *Places to Grow Act*. The objective of the planning program is to protect people and property from water related hazards such as flooding and erosion, maintain and improve water quality and quantity in Lake Simcoe, and protect natural heritage features. In 2007, 394 applications were reviewed under the Planning Act and another 1,290 applications under the Conservation Authorities Act and the Environmental Assessment Act.

As a further level of protection for watershed residents and the Lake Simcoe's watershed environmental integrity, the LSRCA enforces Regulation 179/06. In 2007, the conservation authority received 215 complaints from residents about possible illegal activities in the watershed. Of these, 58 resulted in formal violation notices being issued. Five files are currently in the court system. The conservation authority obtained two convictions in 2007.

Science & Research

Riverprize Finalist in Australia

In September 2007, the Lake Simcoe Region Conservation Authority, representing the partnership of the Lake Simcoe Environmental Management Strategy, was recognized as a finalist for the International Thiess Riverprize, the 'Nobel Prize' for outstanding environmental work in watershed management. Riversymposium Chair Professor Paul Greenfield said, "All people involved in the Lake Simcoe project should feel proud their efforts have been recognized in this way."

Ground Water Management

Computer-based modeling by the York Peel Durham Toronto Study, using existing studies and new seismic and test drilling data, simulated the movement of ground water across the Oak Ridges Moraine and in the Lake Simcoe watershed. This information was used to develop water budget estimates for the southern LSRCA sub-watersheds, and to help complete the Watershed Characterization Report (see Drinking Water Source Protection below).



Drinking Water Source Protection



The Watershed Characterization Report, an important building block of the Drinking Water Source Protection Plan that will be ready by 2012 under the Clean Water Act, was completed. A conceptual water budget - describing all available water within the watershed, how it is used and where it flows - was developed to help in planning for fluctuations in water supply.

Eight municipal water intakes from Lake Simcoe were studied in preparation for the planning that will protect these sources of drinking water. Work began on a study that will identify threats to all municipal drinking water sources in the source water protection region and to analyze the level of risk that they pose. The study will be completed by 2009.

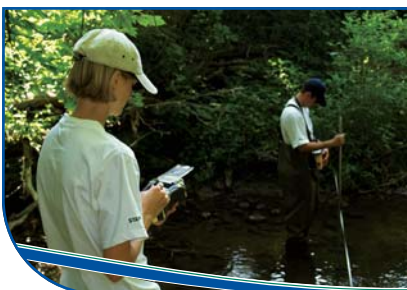
On December 17, 2007 the Source Protection Committee of 25 municipal, industry and community stakeholders and residents met for the first time. The committee will oversee the work to develop the Source Protection Plan in the next five years.

Natural Hazard and Emergency Services Mapping

Natural Hazard Mapping, identifying areas prone to water-related dangers such as flooding and erosion, was originally developed to support the conservation authority's permitting process under Ontario Regulation 179/06 Development, Interference with Wetlands & Alteration to Shorelines & Watercourses Regulation. In 2007 site visits and updated aerial photography improved the mapping's accuracy. Work began to update flow values for various types of storm events in the Beaver and Pefferlaw Rivers and Whites and Hawkestone Creeks. This will help to better predict flood levels in the watershed's rivers and creeks, increasing the ability of the conservation authority and municipalities to protect people living near water courses.

Using new topographic information and flood level data, and the updated Natural Hazard Mapping, the conservation authority enhanced the computer model with which it predicts the specific buildings, roads and railways that will be affected by flooding based on a storm's forecasted severity. In 2007 the conservation authority completed this work for the emergency services in York Region and began modeling for Durham Region emergency services in Uxbridge.

Watershed Monitoring



Water level, water flow, rainfall, air and water temperature gauges across the watershed report directly to the monitoring section of the conservation authority's website. This accessible data assisted the Simcoe County, Durham Region and York Region Low Water Response Teams in responding to low water conditions - two low water warnings were issued on behalf of the York team.

Groundwater is monitored both in the spring and fall at 14 wells to assess water quality. In addition, 12 sites are continually monitored for quantity. Installation of a new rain gauge at the monitored well in Oro-Medonte improved the coverage of the conservation authority's monitoring network.

Open lake monitoring in 2007 included a groundbreaking geologic study of the bottom of Lake Simcoe's Kempenfelt Bay conducted in partnership with the University of Rhode Island and the Ontario Geologic Survey. This contributed to the Watershed Characterization Report (described under Drinking Water Source Protection) and provided critical input for the construction of the City of Barrie's new water intake.

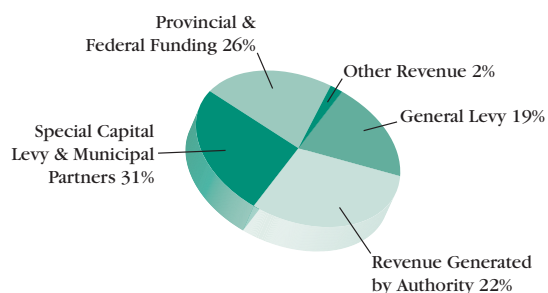
Surface water monitoring initiated an advanced pesticide-monitoring program throughout the Lake Simcoe watershed in partnership with the Ontario Ministry of the Environment. Water quality and quantity sampling continued at 14 surface stations on 12 rivers. Analysis of test results from Musselman's Lake will support the development of the lake's management plan (described under Lake Simcoe Water Quality Improvement Program). Volunteers from the North Mara Beach Residents Association, who sample local creeks and streams, received training in monitoring techniques.

A 2006 research project with the University of Guelph that developed a modeling tool to predict phosphorus entering Lake Simcoe from the atmosphere expanded in 2007 to identify and quantify all sources of atmospheric deposition. The work is nearing completion and the results will guide development of best management practices to reduce airborne pollutants entering the lake.

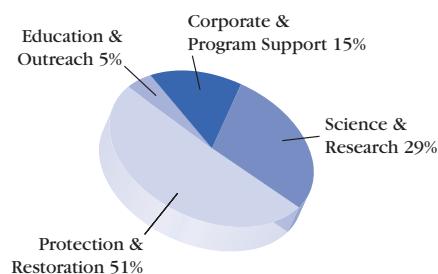
Financial Summary

The following information is condensed from the 2007 Board of Directors approved budget summary. Copies of the complete auditor's report for the year ended December 31, 2007, are anticipated to be available in April 2008, at the conservation authority's head office at 120 Bayview Parkway, in Newmarket. Revenues include funds raised by the Lake Simcoe Conservation Foundation.

Revenues: \$11,537,939



Expenditures: \$11,537,939





Education & Outreach

Education Program



Financial support of the Lake Simcoe Conservation Foundation enabled the purchase of GPS units to teach students to navigate around the park and digital cameras for the "Art in the Park" program. With the help of an intern from York Rangers and the Windfall Ecology Centre, the Educational Centre investigated how it can reduce its environmental footprint and add energy related topics to its programming.

This Year:

- 4,740 students attended the one-day program
- 2,696 students attended the weekday residential program
- 804 visitors attended the weekend residential program
- 139 children participated in the Conservation Kids summer programs

Community Relations and Outreach

The conservation authority engaged watershed residents at eight watershed fairs and festivals in 2007. Two different educational modules, presented to approximately 1,800 children in 15 different schools and community groups, provided information about the function and value of watersheds and wetlands. The Sunoco Earth Day Tree Planting in Newmarket attracted over 450 people who planted 1,100 trees and shrubs. Recognizing the contribution of 21 individuals and groups, the Annual Conservation Awards Gala celebrated these "Environmental Giants" from across the watershed.



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