



Science Research Protection Restoration Education

2006
Annual Report
Lake Simcoe Region
Conservation Authority

The climate of change

The year 2006 was a journey of important accomplishments for the Lake Simcoe Region Conservation Authority. We completed a new, leading-edge scientific project called the Assimilative Capacity Study, developing a model that we can use to predict the impact of different land uses on the quality of Lake Simcoe. We ramped up our Source Water Protection program to protect vital sources of drinking water. We completed a mapping exercise to identify new natural hazard areas. We developed an emergency response mapping model that provides a new world of precision to flood management and warning. We celebrated our 55th anniversary with a ceremony attended by the Minister of Natural Resources. We officially opened our renovated facility on Bayview Parkway. And these are just a few of the milestones we passed on our journey through the year.

2006 was also a year of change. Municipal elections created some changes on our Board of Directors, and we look forward to working with our new representatives as we face the challenges ahead. The future of LSEMS will hopefully include a new governance model that embraces broad stakeholder involvement. Growth is bringing land-use change to the watershed, presenting challenges to municipalities as they work to achieve both economic prosperity and environmental sustainability. And the phrases "climate change" and "global warming" have become part of our daily language.

We rise to the challenge of change in a climate that demands our best leadership, cooperation and partnership. We value working closely with our partners in municipal and other governments to achieve goals of mutual benefit. We continue to engage our stakeholder groups, encouraging all to lend their voices to collective solutions that are good for Lake Simcoe and the watershed. And we continue to reach out to the public with opportunities to make a meaningful difference in the health of our environment and the quality of our water.



Roy Bridge
LSRCA Chair

Gayle Wood
Chief Administrative Officer/
Secretary-Treasurer



We rise to the challenge of change in a climate that demands our best leadership, cooperation and partnership.

2006 LSRCA board members

Town of Innisfil

Councillor Roy Bridge (Chair)

York Region (East Gwillimbury)

Councillor Virginia Hackson (Vice-Chair)

Town of Bradford West Gwillimbury

Councillor Mikki Nanowski

York Region (King)

Councillor Jack Rupke

Durham Region (Scugog)

Councillor Bobbie Drew

Honourary Lifetime Member

Joseph O. Dales

Honourary Lifetime Member

George R. Richardson

City of Barrie

Councillor Jerry Moore

City of Barrie

Mr. Eric Bull

York Region

Mayor James Young

York Region (Georgina)

Mayor Robert Grossi

Town of New Tecumseth

Councillor Barbara Huson

Durham Region (Brock)

Mayor Keith Shier

Township of Oro-Medonte

Councillor Paul Marshall

Durham Region (Uxbridge)

Regional Councillor Susan Self

York Region (Whitchurch- Stouffville)

Councillor Ken Ferdinands

Township of Ramara

Councillor Neal Snutch

City of Orillia (Ex-Officio)

Mayor Ron Stevens

York Region (Newmarket)

Mayor Tom Taylor

City of Kawartha Lakes

Councillor George Davidson

York Region (Aurora)

Councillor John G. West



Assimilative Capacity Study (ACS)

The LSRCA led this study, in partnership with the Province of Ontario and the Nottawasaga Valley Conservation Authority, to evaluate the ability of the watersheds to accommodate new land uses without impairing water quality. This was the initial phase of the Intergovernmental Action Plan for Simcoe County. As part of the study, a number of sophisticated scientific models were developed to predict the impacts that landscape disturbance will have on water quality in watercourses and the lake.

Source Water Protection

Source Water Protection involves reducing the risk of surface and groundwater contamination and ensuring that water quantity is not overused. It is the first step in a multi-barrier approach to protecting Ontario's water resources. The LSRCA is the lead agency coordinating this critical program in the region known as the South Georgian Bay Lake Simcoe Watershed Region. Our partners in this work are the Nottawasaga Valley Conservation Authority, the Severn Sound Environmental Association, and the municipalities within the Black-Severn watershed.

In 2006, we continued to develop a detailed understanding of the surface and ground water systems within the Watershed Region. These include:

- water budgets that help to calculate the amount of water in the system
- assessments of risks to water quality
- detailed data on groundwater and surface water

A recent peer review of these studies concluded that the work is leading-edge science and exemplary water protection planning.

Flood Line/Natural Hazard Mapping

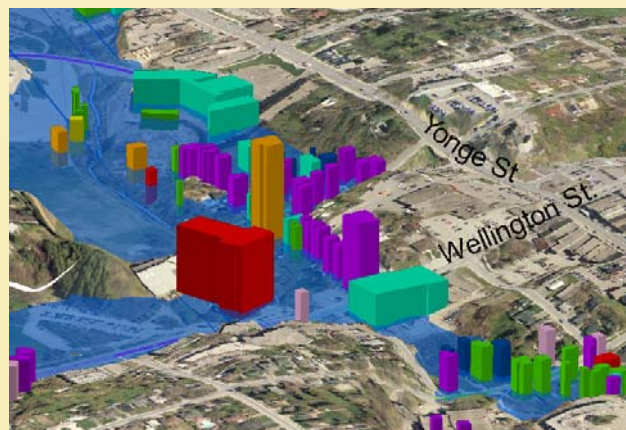
In May of 2006 the Minister of Natural Resources approved the generic mapping of hazards in the Lake Simcoe watershed. This capped a lengthy process of map development for approximately 3,950 km of stream channel, as well as input from municipalities, stakeholders and the public. The Conservation Authority also updated its Watershed Development Policies, including new protections for wetland areas and exemptions for common agricultural practices. This new mapping and policy were distributed widely for public and agency review, and then approved as Ontario Regulation 179/06 in June.

The Conservation Authority's cutting-edge science has taken the generic floodline mapping to new levels of precision. The LSRCA developed a flood model that incorporates all the variables of precipitation, saturation, groundwater, topography and drainage systems. Using this model, flooding under a variety of different storm conditions can now be predicted with much greater reliability.

It is now possible for municipal emergency services to identify individual buildings (offices, homes, schools, etc.) that would be vulnerable during a flood event to improve public safety.



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Research

Stream Health Monitoring

The monitoring of surface and groundwater across the Lake Simcoe basin represents an investment in the protection of one of our most precious natural resources – water. Monitored information is used in a wide range of activities such as investigating water quality complaints, supporting provincial flood and drought response, and land use decisions at the local and provincial levels.

Water quality was monitored at 12 stations on nine different river systems during 2006. Working with its partners, the LSRCA established new permanent water quantity monitoring stations on five catchments that were previously unmeasured. Atmospheric monitoring was improved with the addition of a new climate station in Oro-Medonte. This mass of data was used in the calibration of a three-dimensional digital watershed and lake model that is used to predict the impacts of changing land use on the ecosystem.

A test was conducted of a new online system that will provide public access to monitoring data.

Monitoring contributes information every day into the largest database on the aquatic health of the watershed. This information is critical to assessing the condition of the environment, identifying areas of concern, and supporting restoration projects.

Natural Heritage System

As a tool to help in the long-term protection of natural heritage features in the watershed, the Conservation Authority developed a comprehensive Natural Heritage System. This system identified environmentally significant features (different categories of wetlands, forests, meadows, etc.) and then proposed a policy framework to protect them. The draft report was completed in 2006. A final report to finalize and adopt the system is planned for the spring of 2007, following extensive agency and public stakeholder consultation.



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Watershed Moments 2006

- **February 24** – The Honorable David Ramsay attended the Conservation Authority's Annual General Meeting and congratulated the LSRCA for 55 years of conservation leadership
- **March 30** – Information sessions officially launched the Source Water Protection program in our region
- **April 29** – The Sunoco Earth Day 2006 Tree Planting gave a new home to 1,300 shrubs and trees in Newmarket's George R. Richardson Park
- **May 4** – The Province of Ontario approved Regulation 179/06 "Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses"
- **May 26** – The LSRCA's new Administrative Centre was officially opened



- **July 8** – Threatened Redside Dace were discovered in King City's Kettleby Creek
- **August 9** – Brook trout were discovered in downtown Barrie's Kidds Creek
- **August 18** – The launch of the LSEMS draft One Voice Action Plan was championed by Ontario's Environmental Commissioner Gord Miller
- **October 12** – Conservation Award recipients were celebrated at Georgian Downs, Innisfil
- **October 19** – Ontario's Clean Water Act received Royal Assent



Protection &

One Voice Action Plan for Lake Simcoe

Phase III of the Lake Simcoe Environmental Management Strategy (LEMS) will officially end when the Memorandum of Understanding expires on March 31, 2007. With this in mind, the Lake Simcoe Region Conservation Authority has been engaging partner agencies, citizens, community groups, governments, scientists, and practitioners to help develop a One Voice Action Plan to provide direction into the future.

Following two years of consultations and planning, the One Voice Action Plan draft report was presented on August 18, 2006. It proposed a unified process moving the process forward. It also proposed long-term objectives for the health of the watershed, strong public representation in further planning, and a new governance structure.

Watershed Planning

The Oak Ridges Moraine Conservation Plan (under the provincial *Oak Ridges Moraine Conservation Act*) requires municipalities to produce detailed plans for restoration and protection of lands on the Moraine. In the Lake Simcoe watershed this responsibility belongs to the Regional Municipalities of York and Durham. Through 2006 the Conservation Authority worked with the Region of York to bring their plan into compliance and will complete this process in 2007. The same development of watershed plans is in process for Durham Region.

Lake Simcoe Water Quality Improvement Program (LSWQIP)

LSWQIP provides technical and financial assistance to landowners within the Lake Simcoe watershed to help them complete projects that improve local surface water and groundwater quality, reduce soil erosion, and enhance wildlife habitat. These projects include improvements to such things as manure storage facilities and septic systems, fencing to keep livestock from contaminating streams, and reforestation. LSRCA also works with municipal governments to retrofit urban stormwater management ponds. By working together, the Conservation Authority and its community partners have decreased the amount of pollution entering Lake Simcoe and its tributaries.

There has been dramatic growth in the LSWQIP program recently, reflecting the challenges and opportunities facing water quality in the watershed. Two new Watershed Coordinators hired in 2006 are working to raise the profile of the program and increase the number of participating landowners. One of the Coordinators, funded by the Lake Simcoe Conservation Foundation, has focused on the East Holland River. To address urban stewardship opportunities, an Environmental Project Coordinator undertook a number of stormwater management and streambank erosion projects in cooperation with our municipal partners.

- 184 projects completed in 2006, bringing the total number of restoration projects to over 800 since 1990

Environmental Plan Review & Regulations

The LSRCA continued to provide professional review and commentary on land use planning and development applications, based on the best available science and in the context of current government policy. The Conservation Authority also reviewed permit applications from individual landowners in its continuing role to protect public lives and property from the potentially devastating impacts of floods and erosion. As anticipated, the larger volume of planning applications and permits in 2006 demonstrated that growth continues to increase within the watershed.

- Responded to 54 Official Plan amendment applications and 144 zoning amendment applications
- Responded to the following applications: 21 for subdivision, 103 for consent/variances, 183 for site plans, 202 for site clearances, and 632 for permits
- Responded to 209 property information requests

In 2006 a second Environmental Officer was hired to support compliance with policies and regulations. Officers investigated 154 potential infractions and issued 17 permit violations resulting in two convictions.





Restoration

Flood Forecasting & Warning

The Conservation Authority's flood forecasting and warning system continued to provide municipalities and other government agencies with information about potential flooding in the watershed. The addition of three new river flow and precipitation monitoring stations in 2006 enhanced the data collection system. In addition, new software provided automatic data downloads from all monitoring stations, giving staff real-time information to make decisions regarding flooding and warnings.

- During 2006, the LSRCA issued 20 flood warnings and Spring Ice Break-up bulletins using its web-based faxing and voice mail system.

Land Securement

In March 2006 the LSRCA Board of Directors approved The Natural Heritage System Land Securement Project 2006-2010 which outlines how lands within the LSRCA watershed will be identified, evaluated and targeted for securement.

The LSRCA acquired two new properties and is in the process of finalizing two additional acquisitions within the environmentally sensitive Beaver River Wetland Project Area. Funding was approved through the Natural Spaces Land Acquisition and Stewardship Program administered by the Ontario Heritage Trust, the Symons bequest administered by the Nature Conservancy of Canada, and the Lake Simcoe Conservation Foundation. Other land securement initiatives in 2006 included a donation of lands in East Gwillimbury and the Township of Uxbridge, and the co-signing of a Conservation Easement Agreement with the Oak Ridges Moraine Land Trust for 108 hectares (269 acres) of Oak Ridges Moraine land in King Township.

Conservation Areas

LSRCA now owns 1,173.3 hectares (2,881.2 acres) of environmentally sensitive lands including upland forests, wetlands and Oak Ridges Moraine lands. The Conservation Authority continued to work with local groups and municipal partners on capital improvements, trail development and land management.

Reforestation

Working in partnership with private landowners, municipal partners and community groups, 43 tree and shrub planting projects were completed across the watershed in 2006. Funding for these initiatives was provided through the York Natural Planting Partnership, Lake Simcoe Water Quality Improvement Program, Lake Simcoe Conservation Foundation, municipalities, and private landowners. Using native species, these projects contributed to the expansion of existing forest cover, buffering of watercourses, connection of natural features, and establishment of wildlife habitat. Public planting events in partnership with Earth Day Canada, Sunoco, the Lake Simcoe Conservation Foundation, Scouts Canada, the Bogart Creek Restoration Committee and the Uxbridge Watershed Advisory Committee engaged the public in environmental stewardship activities.

- 47,177 trees and shrubs planted
- 20.5 hectares reforested
- 3.8 km of streams buffered

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Education & Outreach

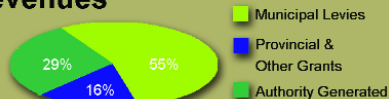
Financial Summary

The following information is condensed from the 2006 Board of Directors approved budget summary. Copies of the complete auditor's report for the year ended December 31, 2006 are anticipated to be available in April 2007, at the Conservation Authority's head office at 120 Bayview Parkway, in Newmarket.

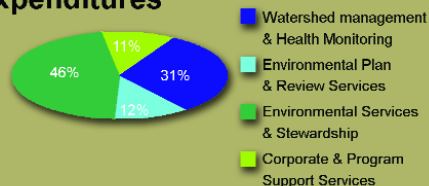
Revenues:	\$12,484,867
Municipal Levies	6,815,317
Provincial & Other Grants	2,015,161
Authority Generated	3,654,389

Expenditures:	\$12,484,867
Watershed Management & Health Monitoring	3,842,868
Environmental Plan Review & Regulations	1,463,566
Environmental Services & Stewardship	5,835,570
Corporate & Program Support Services	1,342,863

Revenues



Expenditures



Conservation Education

The hands-on education programs at Scanlon Creek and Sheppard's Bush continued to grow in variety and popularity, and continued to help develop caring, respectful citizens of the watershed. A curriculum breakthrough this year at the Professor Smith Educational Centre was the development of a module on free trade that helped schools deliver a civics requirement while making learning fun and meaningful for students. The Nature Centre's day programming has expanded into the winter, and the Conservation Kids program continued to bring a fun, nature-based summer program to families in Aurora.

Upgrades to the Education Centre included painting and staining, as well as 26 new energy conserving windows.

- 4,800 students attended the one-day program
- 3,065 students attended the weekday residential program
- 584 visitors attended the weekend residential program
- 152 children participated in the Conservation Kids programs

Community Relations

The LSRCA continued to reach out to the communities in the watershed to encourage residents to take an active role in caring for the natural environment. This included public presentations and workshops, displays at exhibitions and festivals, science fairs, and public events. Our outreach program extended our educational and experiential program into the classrooms of nearly 1,000 students with a program about the importance and value of wetlands.

Over 400 watershed residents took part in the 2006 Sunoco Earth Day Tree Planting Event in April, planting over 1,300 native trees and shrubs in Newmarket's George R. Richardson Park. A new community events calendar was created on the LSRCA website to inform the public about upcoming environmental events & activities. The continuing program of news releases and media advisories was stepped up in 2006 with significant increases in public media attention.

Conservation Awards

The LSRCA recognized "Environmental Giants" across the watershed at its annual Conservation Awards Ceremony on October 12, 2006. This year's Awards were presented to:

- Dr. George Connell (George R. Richardson Conservation Award of Honour)
- Ross David James (Conservation Award of Merit – Individual)
- North Mara Beach Residents Association (Conservation Award of Merit – Group)
- Michelle Minnoch (Media Recognition Award)
- Gwynneth Rooke (Soil Conservation Award)
- Bogart Creek Restoration Project Committee (Water Conservation Award)

Volunteers were also recognized for supporting the LSRCA's conservation work:

- Tri Rotary Club of Barrie
- Sunoco Earth Day Tree Planting Volunteers

The Lake Simcoe Conservation Foundation

The Lake Simcoe Conservation Foundation remains highly committed to continuing to provide funds for specific projects that contribute to the restoration and protection of the Lake Simcoe Watershed. To this end we are pleased to report more progress in 2006.

Thanks to funding by TD Canada Trust a new energy program is now being offered at the Professor E.A. Smith Education Centre. Children in grades 2 and 5 now have the opportunity to learn about alternative forms of energy and energy conservation in a hands-on interactive environment.

Our pledge of \$205,000 to help fund the restoration of 300m of streamchannel and the creation of fish habitat and greenspace in downtown Barrie continues to generate interest. The Kidd's Creek project is an excellent example of what we can achieve when we work together. We are grateful to all donors who have helped raised over \$70,000 to date for this project. We look forward to celebrating our mutual success with the community in the fall of 2007 when we all come together to put the final touches on this streambank restoration project.

2006 was also the year our Board of Directors took a leadership role in the restoration of the East Holland River. Our initial investment of \$100,000 and our additional commitment of \$500,000 from The R. Samuel McLaughlin Foundation will result in a healthier local ecosystem and ultimately improve the quality of the water draining into Cooks Bay. This long-term project will ultimately require \$17,000,000 and collaboration from all sectors over the next five years.

The Lake Simcoe Conservation Foundation believes that joint efforts will create a healthier Lake Simcoe ecosystem. For this reason we are pleased to be a part of the evolution of LSEMS and remain loyal and committed to the process.

The Lake Simcoe Conservation Foundation is proud of the progress we have made in 2006. We know that more work needs to be done and we are optimistic that the level of funding for a healthy Lake Simcoe will increase exponentially in the coming year.



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