



2005 Year In Review



Table of Contents

Welcome Message from the Chair	1	Wetland Protection - Durham Coastal Monitoring Project	11
Watershed Planning & Oak Ridges Moraine Conservation Plan (ORMCP)	2	Fish Tales	11
Provincial Greenbelt Plan	3	Collecting Bugs To Monitor Watershed Health	11
Planning and Regulations	3	Bowmanville Westside Marshes Conservation Area	12
2005 Watershed Awards	4	Long Sault Conservation Area	12
Conservation Authorities Moraine Coalition (CAMC)	4	Stephen's Gulch and Heber Down Conservation Areas	12
Watershed Stewardship	5	Source Water Protection (SWP)	13
Oak Ridges Trail Association (ORTA)	6	York- Peel- Durham - Toronto (YPDT) Groundwater Initiative	13
Oak Ridges Moraine Foundation	6	Groundwater Resources Inventory Project (GRIP)	13
Generic Regulation Mapping	6	Learning About The Environment (Authority Education Programs, Durham Children's Groundwater Festival & Summer Events)	14
Flood Forecasting and Warning System	7	Aquatic Resource And Fisheries Management Plans	15
Natural Heritage Discussion Group	7	Loosestrife Bio-Control Workshop	15
Conservation Areas Management Plans	8	Nature & Computers	16
Runnymede Tract	8	See Us On The Web	16
New Property Acquisitions	9	30th Anniversary Purple Woods C.A. Maple Syrup Festival	16
Volunteer Groups Active in Conservation Areas	9		
Wetlands Updates	10		
Bowmanville Westside Marshes C.A. Mangement Plan	10		

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Welcome Message from the Chair

It is with great pride that I present the 2005 Year In Review Report of the Central Lake Ontario Conservation Authority (CLOCA). 2005 proved to be an exceptionally busy year for the Conservation Authority and I would like to express my appreciation to the staff and Board of Directors for their support and hard work. In addition to the ongoing traditional programs, a considerable amount of time was required to deal with a number of provincial and municipal issues.

1. Durham Region Official Plan Review and integration of the Oak Ridges Moraine and Greenbelt legislation.
2. Source Water Protection: The provincial government introduced the Clean Water Act and is rolling out the related regulations and guidelines.
3. Conservation Authorities Generic Regulations: CLOCA has been the lead conservation authority for this initiative on behalf of Conservation Ontario and its 36 member conservation authorities.
4. Provincial introduction of the Greenbelt and Places to Grow legislation and associated changes to the Planning Act and Provincial Policy Statements have confirmed the Province is back in the land-use planning process in a major way.

CLOCA continued to be active in land acquisition around its core holdings on the Oak Ridges Moraine. Approximately 250 additional acres were purchased for the Enniskillen Conservation Area, bringing total holdings above 700 acres. CLOCA continues to receive strong support for this initiative from the Region of Durham, Oak Ridges Moraine Foundation, Nature Conservancy of Canada and the Ministry of Natural Resources Ecological Land Acquisition Program.

The Minister of Natural Resources has approved the transfer of approximately 105 acres of provincial land to CLOCA as an addition to the Lynde Shores Conservation Area. At this time it is not clear whether this will be a transfer of title or a long term (e.g. 99 year) lease; a decision from the Ontario Realty Corporation is awaited.

CLOCA has been involved for several years with a number of agencies in developing the East Cross Forest proposal for the Region of Durham and Township of Scugog. It has now been determined that the Kawartha Region Conservation Authority will take the lead on this initiative with the financial support of Durham and Scugog and the Oak Ridges Moraine Foundation.

I would like to take a minute to talk about CLOCA's community outreach in 2005.

This year two milestones were reached with regards to several events. The annual Maple Syrup Festival hosted by CLOCA at Purple Woods Conservation Area celebrated its 30th anniversary with special event days and attractions. Over the 11 day festival more than 9,000 people welcomed spring with a visit to Purple Woods.

In late September, the 8th annual Durham Children's Groundwater Festival was held at Camp Samac in Oshawa with over 5,000 grade four students participating. This year was a milestone as the organizing committee set an attendance goal in 1998 to have 5,000 students attend in one year and this year they reached that goal. On behalf of the Conservation Authority I would like to extend our appreciation to all of the organizing committee members that make this event a success and congratulate them on achieving their goal.

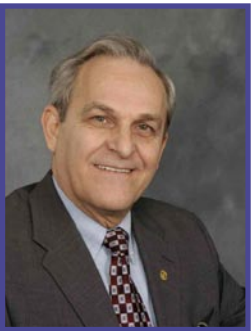
Authority staff also made it a priority in 2005 to meet watershed residents by setting up information displays at the various fairs and events to promote the Authority's programs and services. The Authority's solar water pump display at the Orono and Brooklin Fairs caught the attention of many visitors.

During July and August CLOCA reintroduced free public environmental events in the conservation areas for watershed residents. Many residents enjoyed the scheduled 19 events that included nature hikes, bird watching, nature scavenger hunts, ecosystems and more with an emphasis on building knowledge of our local watersheds.

The above projects would not be possible without the support of our community partners: Region of Durham, member municipalities, environmental organizations and watershed residents.

Sincerely,

Jim Schell
Chair, Central Lake Ontario Conservation



Watershed Planning & Oak Ridges Moraine Conservation Plan (ORMCP)

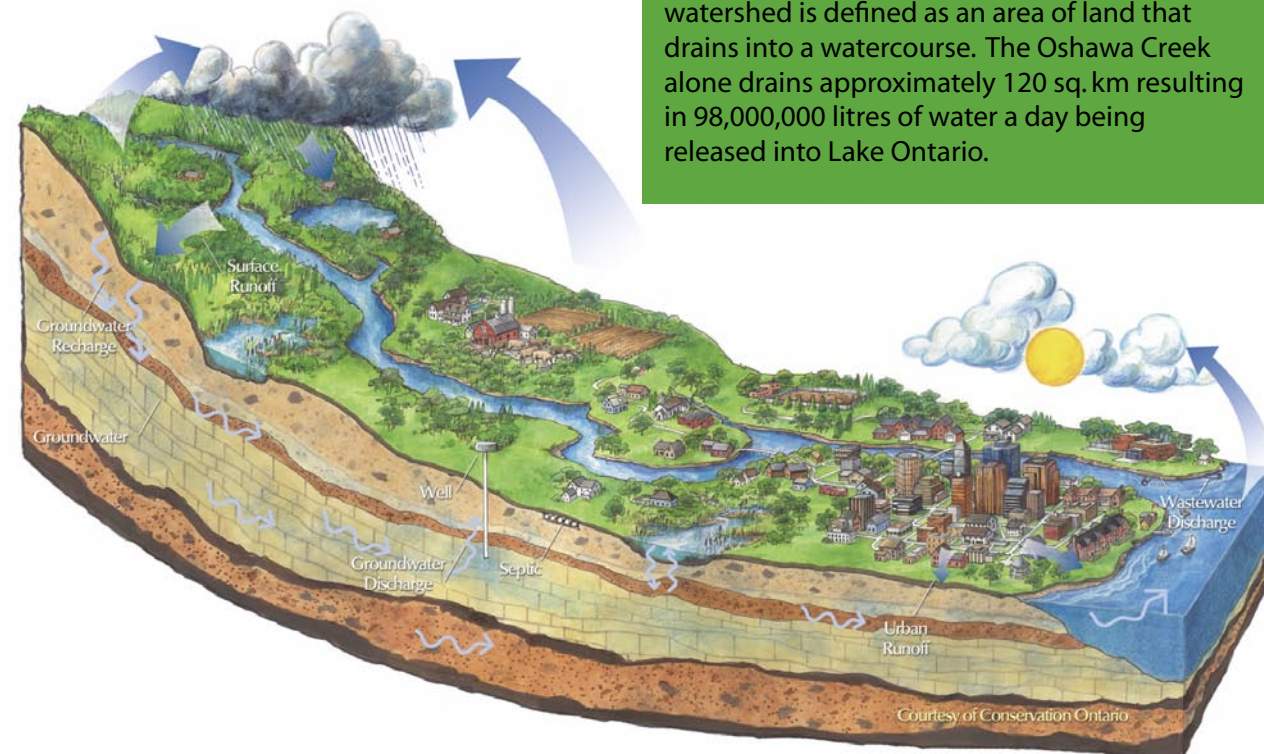
Central Lake Ontario Conservation Authority (CLOCA) is working with Durham Region to ensure that its watershed planning activities meet the watershed planning requirements of the Oak Ridges Moraine Conservation Plan (ORMCP) while capitalizing on provincial funding that has become available for source water protection (SWP). Watershed plans allow for the assessment of the current state of the watershed and lay out a management plan for the wise use of the resources.

While work on watershed plans has been initiated in all fifteen watersheds within Central Lake Conservation's jurisdiction, emphasis over the next three years will be those seven watersheds with headwaters in the ORM, resulting in four watershed plans (new and updated) for: Lynde Creek, Oshawa Creek, Black/Harmony/Farewell Creeks, and Bowmanville/Soper Creeks. Component studies are being/have been undertaken within these watersheds as well as the small watersheds draining to Lake Ontario in 2005 and 2006.

In 2005, staff set up the database for the field information collected in the summer 2004 and drafted preliminary chapters of the existing conditions report for the Bowmanville and Soper Creek watersheds. Focus has been on those areas not covered by SWP funding e.g. natural heritage. A draft Existing Conditions report for Bowmanville Soper Creek Watershed will be available in 2006.

In 2006, staff will focus on drafting the Existing Conditions report for Black/Harmony/Farewell Creeks and finalizing/updating those for the Lynde Creek, Oshawa Creek and Bowmanville/Soper Creeks in preparation for public consultations in 2007. Various products will be developed to ensure that consultation is both efficient and effective for purposes of completing watershed plans that meet ORM requirements while capitalizing on provincial funding for SWP.

Yes, everyone lives in a watershed and our actions affect the health of the watershed. A watershed is defined as an area of land that drains into a watercourse. The Oshawa Creek alone drains approximately 120 sq. km resulting in 98,000,000 litres of water a day being released into Lake Ontario.



Provincial Greenbelt Plan

On February 28, 2005 the government passed the Greenbelt Plan, which permanently protected more than one million acres of land, from the eastern end of the Oak Ridges Moraine to the Niagara Escarpment in the West. Within the Greater Golden Horseshoe, this Plan covers lands already provided protection through the Oak Ridges Moraine Conservation Plan (ORMCP) as well as the Niagara Escarpment Plan.

From the presentation of the initial mapping for the Greenbelt Plan, the Authority was concerned with the lack of protection afforded to natural heritage systems within our western watersheds. Through the public/agency consultation process, in late 2004 and early 2005, the Authority submitted recommendations to the Province that resulted in more protection for these western watersheds, namely Lynde and Oshawa Creeks.

The Greenbelt Plan will provide protection of natural heritage systems and features, key hydrologic features as well as hazard lands associated with river/creek systems south of the Oak Ridges Moraine, from urban and rural development pressures and expansions, for those areas currently outside of existing urban boundaries within our member municipalities. Additional protection to head water areas, not previously addressed through the Oak Ridges Moraine Conservation Plan, will also be provided for through the Greenbelt Plan. This Plan also affords protection to agricultural lands within the Authority's watersheds.

With the implementation of the new Provincial Policy Statement and the Greenbelt Plan in 2005, along with the existing Oak Ridges Moraine Conservation Plan, significant protection to our existing natural heritage systems and hazard lands has been achieved for those lands within the Oak Ridges Moraine and the valley systems south of the Moraine to the existing urban boundaries. With the introduction of the draft Growth Plan in late 2005, by the Province, similar protection may be extended into the existing urban areas within Authority's jurisdiction. This plan proposes intensification within existing urban areas, rather than urban expansions, the establishment of

"growth centres" to which development will be directed, and the establishment of a natural system through the "sub-area growth plans". Presently, the Growth Plan has been put forward for public and agency review and input. Within the Growth Plan, downtown Oshawa has been identified as one of the future "growth centres" within the Greater Golden Horseshoe.

More information on the Provincial Greenbelt Plan is available through the Authority's web site, www.cloca.com, in the library section.

Planning and Regulations

The Planning and Regulations Department provides environmental review of development proposals submitted by municipalities, developers and the general public.

Fill, Construction and Alteration to Waterways Regulations administered by the Authority ensure residents are protected and the integrity of the watershed floodplains is maintained. By directing development away from flood and erosion prone areas, we reduce the risk of life and property as a result of flooding and erosion.



Statistics for 2005:

- 267 new planning files were created (a total of 796 pieces of correspondence)
- 191 requests for information (verbal and written) regarding properties within the watershed
- 274 occurrences under the Fill Construction and Alteration to Waterways Regulation that include both permits and violations

2005 Watershed Awards

The Authority's biennial Watershed Awards ceremony was hosted in early December and was a great success. The evening consisted of a community environmental fair, award ceremony and a guest speaker. The Watershed Awards were developed by the Authority to give recognition and show appreciation for outstanding environmental contributions made by the community for the stewardship and enhancement of the Authority's watersheds.

This year 15 awards were presented along with a Special Recognition Award. More information is available online at www.cloca.com



A Community Environmental Fair was part of this year's Award's Ceremony.



Guest speaker Mr. Derek Hatfield, Skipper of the Spirit of Canada, told of his adventures in the 5-Oceans Solo Round the World Sailing Race in 2003 and how he is preparing for the race in 2006.



CLOCA Chair Jim Schell (left) presents a special recognition watershed award to Reverend Frank Lockhart for his work with Valleys 2000 in Bowmanville.

Conservation Authorities Moraine Coalition (CAMC)

The Oak Ridges Moraine (ORM) is a major landscape feature having significant hydrological (water) functions. Crossing nine Conservation Authorities, the moraine stretches from the Niagara Escarpment to Trenton and covers a distance of over 160 kilometres. By forming the Conservation Authorities Moraine Coalition (CAMC), the nine Conservation Authorities work together to conserve and protect the Oak Ridges Moraine and ultimately sustain a source of safe drinking water in Ontario.

As a founding member of the Oak Ridges Moraine Stewardship Partners Alliance (ORMSPA) in 2005, the CAMC partnered with more than 30 organizations plus individual private landowners to:

- 1) Restore habitats on the moraine by completing 21 stewardship projects on more than 56 ha of land, including planting of more than 20,000 trees and shrubs, wetland creation, riparian habitat restoration and prairie creation.
- 2) Permanently protect significant ORM lands through the acquisition of 4 new properties totaling over 312 ha. including:
 - 61 ha in the Duffins Creek watershed in the Township of Uxbridge
 - 100 ha in the Enniskillen Valley (totaling over 240 ha secured in the area)
 - 107 acres of Natural Core Area lands adjoining additional conservation lands previously secured by Nature Conservancy of Canada.
- 3) Produce and distribute an ORM stewardship handbook for rural non-farm landowners titled "Caring for Your Land".

Watershed Stewardship

In 2004 the Central Lake Ontario Conservation Authority (CLOCA) launched a series of programs to assist private landowners within the Authority's watershed with environmental projects to increase the health of the watershed. The Conservation Authority expanded the programs in 2005.

The Authority's tree seedling sales program continues to be popular with over 14,000 seedlings sold and distributed in 2005. Bulk ordering of trees enables CLOCA to sell trees to watershed residents at low cost.

The Clean Water Stewardship Program continues to grow, with several more projects in the planning stages. CLOCA has also agreed to act as a delivery agent for the Greencover Canada program, and will be able to offer greater financial incentives to landowners who undertake work related to the protection of waterways and restoration planting.

In 2005 the stewardship program staff from the Conservation Authorities of Durham Region, Durham Region Economic Development and Durham Stewardship Council began meeting to share ideas and work towards greater consistency in programs across the Region. These meetings have resulted in greater coordination of efforts, increased awareness of events and activities, and more efficient delivery of programs. The group also arranged for a special Environmental Farm Plan (EFP) training workshop to educate staff of the requirements for completing EFP's.

Central Lake Ontario Conservation has been active in the development and submission of a proposal to carry out stewardship activities on private lands within an area defined as Conservation Priority Area (CPA) #11 (Glen Major/Chalk Lake area) through the Oak Ridges Moraine Foundation Restoration Strategy. The Oak Ridges Moraine

Foundation recently accepted the proposal, with funds being made available for on the ground projects and for the implementation of a landowner contact program within CPA 11. The CPA 11 working group has recently delineated sub-target areas within CPA 11, three of which fall within the CLOCA jurisdiction.

Central Lake Ontario Conservation is currently developing restoration plans for 3 privately owned properties in the CPA and is currently developing restoration plans for three landowners in the area. These projects are being delivered through CLOCA's Clean Water Land Stewardship Program, with top-up funding being made available through the CPA 11 stewardship-funding program.

The stewardship program was promoted to watershed residents with displays at the Brooklin Spring Fair and the Orono Fall Fair, and presentations at meetings of the Durham Agricultural Advisory Committee, Clarington Agricultural Advisory Committee, and Beef Management Club.



Where's The Plug? Solar water pumping system attracted a lot of interest at the Orono and Brooklin Fairs. Funding through the stewardship program is available to landowners to assist in the installation of the above system to water livestock.

Oak Ridges Trail Association (ORTA)

The partnership between the Oak Ridges Trail Association (ORTA) and Central Lake Ontario Conservation Authority (CLOCA) continues to grow. From the initial project of rerouting a section of the Oak Ridges Trail through Long Sault Conservation Area in 2004, the trail now also passes through Purple Woods C.A. in Oshawa. Both organizations are working together on future trail restructuring to reroute the trail through both Crow's Pass C.A. in Scugog and the Rahmani Tract in Oshawa. An official opening of the Purple Woods trail section is planned for spring of 2006.

The partnership helps the ORTA work towards one of their long-term goals of a trail that runs the length of the Oak Ridges Moraine without the use of roadways. The rerouting of the trail through CLOCA lands also offers ORTA members more interesting landscapes, and provides the Authority with regular visitors who respect the rules and regulations of our conservation areas.

Oak Ridges Moraine Foundation (ORMF)

The Oak Ridges Moraine Foundation (ORMF) was created to help preserve, protect and restore the environmental integrity of the Oak Ridges Moraine, a prominent geological landform spanning across CLOCA's watershed. The Foundation operates primarily by funding the work of others and offers leadership or coordination for Moraine wide activities.

Over the past year, the ORMF assisted the Conservation Authority in securing 250 acres of environmentally sensitive land within the Enniskillen Valley. CLOCA has also been involved in the Oak Ridges Moraine Landowner Contact and Stewardship Project. The project involves implementing both landowner contact in key strategic areas and implementing stewardship projects to meet the restoration targets as set out in the ORM Restoration Strategy.

Generic Regulation Limit Mapping

Early in 2005, Central Lake Ontario Conservation Authority (CLOCA) completed mapping of natural hazards and wetlands and presented proposed Regulation Limit mapping at a series of public information sessions in May and June of 2005. This work has been completed to meet the provincial requirements for the new Ontario Regulation 97/04, made under the Conservation Authorities Act, entitled *Development, Interference with Wetlands and Alterations to Shorelines and Watercourse*.

CLOCA was the first Conservation Authority in Ontario to complete mapping and attain approval of the proposed regulation from the provincial peer review committee. The new regulation will be implemented in May 2006.

Central Lake Ontario Conservation staff are also developing Digital Elevation Models, topographic mapping, and floodplain mapping updates for various watersheds. This work will be used to continuously improve information for flood warning, regulation, and development review projects.



Sample of regulation mapping.



Public looking over the information at one of the three generic regulation open houses.

Flood Forecasting And Warning System

The Flood Forecasting and Warning system continues to improve. In addition to monitoring weather and stream systems, and issuing 12 Flood Safety Bulletins during 2005, new gauging stations were installed, and a flood vulnerable database was created. These improvements are components of a strategy to provide effective information collection and reporting to municipal partners during times of flood emergency.

The gauging stations are also used to track streamflow, stream water temperature, air temperature, and rainfall. This data is important for many programs including aquatic research, low water response, watershed planning, and water budgeting. The summer and early fall of 2005 were unusually warm and dry, and the CLOCA watershed

fell into a Level 2 Low Water Condition. News releases were used to inform watershed residents, and encourage a reduction in water use during the drought.

CLOCA also continues to conduct groundwater and surface water monitoring across the watershed in partnership with the Ministry of Environment, and analyze trends in water quality from the various gauge sites and watersheds.



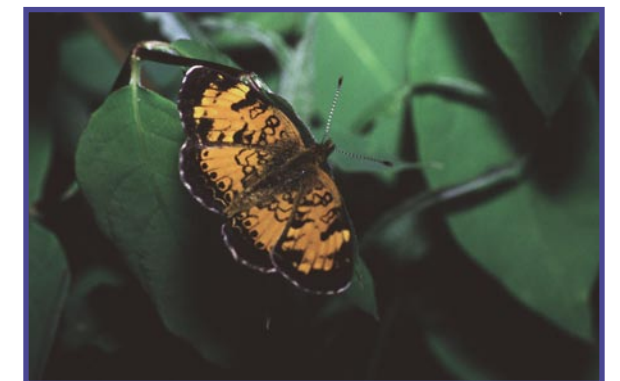
Stream Gauge Hut

Natural Heritage Discussion Group

The primary purpose of the Natural Heritage Discussion Group is to provide a forum for information exchange on natural heritage issues, techniques in data collection, mapping/analysis, keeping up-to-date on emerging new approaches in landscape ecology, conservation biology and implementation within planning and stewardship programs. The Conservation Authorities that make up this group will strive for compatibility in their approaches to natural heritage planning, recognizing the unique needs of each Conservation Authority's jurisdiction.

With a membership that includes (at minimum) the nine conservation authorities have sections of the Oak Ridges Moraine within their jurisdictions, the discussion group's role includes working with the Conservation Authorities Moraine Coalition (CAMC) to provide advice to the Authorities and liaising with other moraine groups. Central Lake Ontario Conservation participated in this group throughout 2005 and Chair a sub-committee formed to examine issues involved with invasive species. With regard to invasive species,

in 2005, a pilot project was undertaken with the Ministry of Natural Resources to test control measures for dog strangling vine at Long Sault Conservation Area. A funding application has been submitted to Environment Canada to research the different types of vegetative invasive species in our jurisdiction for purposes of classifying them for priority management actions. The primary focus of the Discussion Group in 2005 was natural heritage system modeling, see *Nature & Computers* on pg. 16.



Pearl Crescent Butterfly - Picture taken at Heber Down C.A. Photo courtesy of Mr. Gerry Ernest.

Conservation Area Management Plans

In 2005, staff continued to develop management plans to guide the development and operation of our various conservation areas. The general goals of all conservation area management plans are:

- 1) To identify, protect and enhance the current and potential natural heritage features, attributes, functions and linkages of the area
- 2) To provide the public with enjoyable and educational opportunities that will not threaten the health of the area
- 3) To promote the cultural and heritage significance of the area.

A conservation area management plan outlines the existing conditions within a property, (i.e. what is currently there, who uses the property etc.), a long-term concept plan for the area (i.e. what does one expect to see going on in the area in twenty years) and a management strategy (i.e. what management activities need to take place now and in the future in order to achieve the long-term concept plan). Conservation area management plans are working documents that are intended to help guide Central Lake Ontario Conservation staff who are working to protect the natural heritage features on the property, carry out resource management activities and manage the public use that occurs within the area.



Kid's Fishing Day At Heber Down Conservation Area.

Conservation Area Management Plans are currently being developed for Bowmanville/Westside Marshes Conservation Area and Crow's Pass Conservation Area.

Runnymede Tract - Lynde Shores Conservation Area

During the spring of 2005, over 20,000 seedlings were planted to convert the Runnymede Tract from crop production to forest habitat. The planting project was subsidized through the Trees 2020 program. A fall mortality survey was conducted in the fall and in-fill planting and tending will be completed as necessary in 2006.



Tree planting

New Property Acquisitions - Enniskillen Valley

Central Lake Ontario Conservation acquired 250 acres of significant land on the south slope of the Oak Ridges Moraine in 2005 as part of a larger land assembly within the Enniskillen Valley area. Together with the 2003 and 2004 land acquisitions, the total protected area in this valley is now approximately 600 acres. Long-term protection of this largely undisturbed area will ensure that significant ground/surface water resources, wildlife habitats and geological features will be retained for the benefit of future generations. *Thank You!*



2005 Enniskillen Valley Land Acquisitions



New land acquired in the Enniskillen Valley.

The 2005 land acquisitions were made possible with support from:

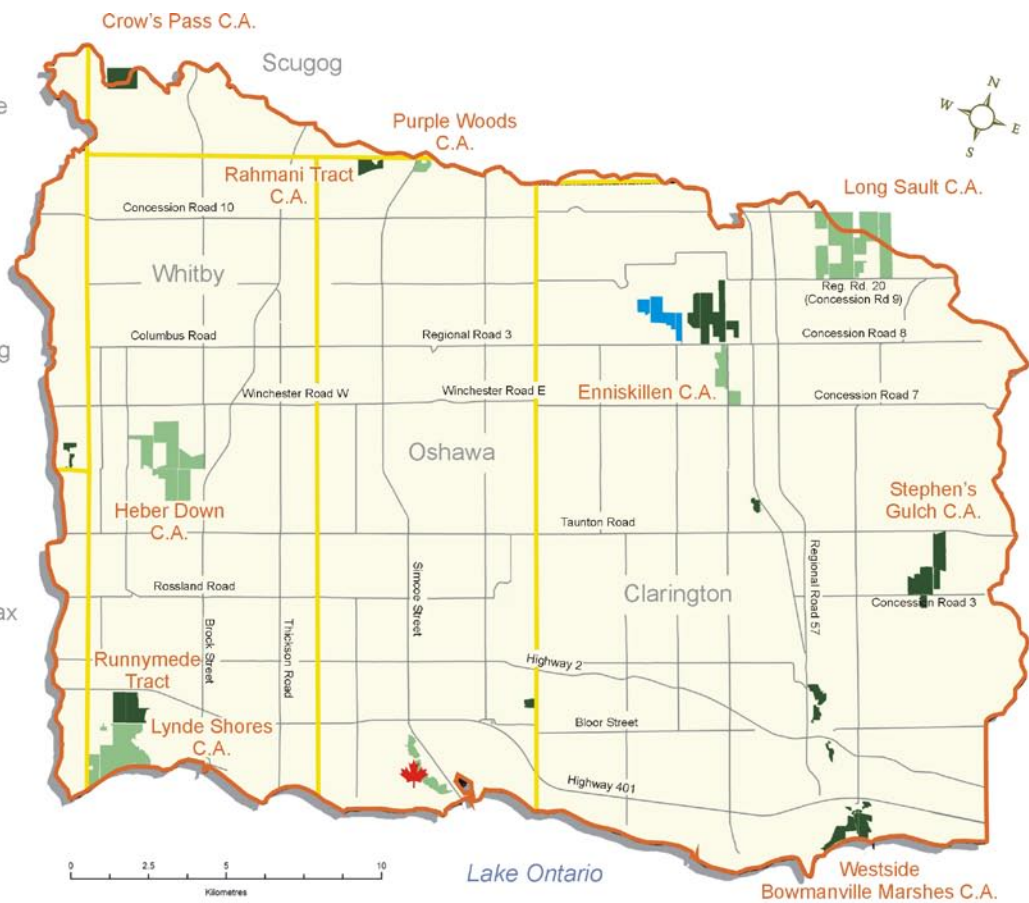
- Oak Ridges Moraine Foundation
- Regional Municipality of Durham
- Nature Conservancy of Canada through The Ontario Greenlands Program
- The Ontario Ministry of Natural Resources through the Ecological Land Acquisition Program
- Central Lake Ontario Conservation Fund.

Volunteer Groups Active In The Conservation Areas

Volunteer groups have been active in our conservation areas throughout 2005. On June 4, Central Lake Ontario Conservation, in partnership with the Durham Region Field Naturalists and Ontario Nature, hosted a Volunteer for Nature event at one of the recently acquired properties in the Enniskillen Valley. Volunteers, led by experienced botanists, completed plant inventories according to the Ecological Land Classification protocol. Lists of birds, amphibians and butterflies/moths present within the area were also compiled

throughout the day. Data collected through this inventory event will be used to determine how the area should be managed in the future and will become an integral part of the management plan that will be developed for the new properties in the future.

To provide more opportunities for watershed residents, the Authority launched a new volunteer program in 2005. The purpose of the program is to match the interests of the public wishing to volunteer for Authority projects. Many students took advantage of this program to acquire community volunteer hours. Over 3,000 hours of volunteer service was registered. Volunteers assisted the Authority in planting projects, clean-ups, Purple Woods Maple Syrup Festival, Durham Children's Groundwater Festival, community events, Authority summer events and more. **If you wish to register as a volunteer please contact Ms. Annette McDonald at the Authority office (905) 579-0411, ext. 144 or visit our web site at www.cloca.com.**



Working In Partnership For Healthy Watersheds

Everyone lives in a watershed. Your watershed is made up of different ecosystems that are interconnected and impact on the quality and quantity of our drinking water sources. These ecosystems include: wetlands, forests, creeks and wildlife.

Conservation Authorities provide expertise and programs to find balanced, sustainable approaches to meet our environmental, human and economic needs.

Wetlands Update

In 2005, Central Lake Ontario Conservation Authority again partnered with the Durham Land Stewardship Council to conduct wetland evaluations across the Authority's jurisdiction.



Aquatic plant sampling.

Three existing evaluations were updated along with three new evaluations to determine whether the wetlands are provincially significant (PSW) or locally significant (LSW). The information acquired through these evaluations assist natural heritage staff at Central Lake Ontario Conservation in providing technical comments regarding these wetlands. The Wetland evaluations are scheduled to be available in print in early 2006. All of the wetlands evaluated in 2005 are located along the sensitive Lake Ontario shoreline.

Below are the coastal wetlands that have been included in the recent Authority evaluations and their status:

Bowmanville Marsh (PSW - Clarington), Lynde Creek Complex (PSW - Whitby), Tooley Creek (Status as yet unknown - Clarington), Pumphouse Complex (PSW - Oshawa), Gold Point (Status as yet unknown - Oshawa), and Oshawa Creek Complex (Status as yet unknown - Oshawa).



Wood Duck at Cranberry Marsh.
Photo Courtesy of Mr. Gerry Ernest

Bowmanville/ Westside Marshes Conservation Area Management Plan

With the recent reconfiguration of Westside Marsh, land acquisition from St Marys Cement, and, the 2005, re-evaluation of Bowmanville Marsh, Central Lake Ontario Conservation and Municipality of Clarington staff are completing a draft Management Plan for the Bowmanville/Westside Marshes. The Plan will adopt information from public meetings and environmental studies, completed for the area.

Additionally, Central Lake Ontario Conservation was successful in receiving a grant through the Healthy Wetlands Program sponsored by the Ministry of Natural Resources and Ducks Unlimited for the construction of trails, viewing mounds, interpretive signage, and a parking lot for the upland portion of the Bowmanville/ Westside Marshes Conservation Area. Much of this work was undertaken in 2005 and it is anticipated that both the improvements and the Management Plan will be completed early in 2006. *See page 12 for more information on the trail system.*

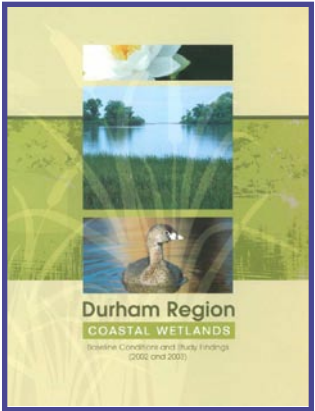


Osprey on nesting platform at Bowmanville/ Westside Marshes.

Wetland Protection - Durham Region Coastal Wetland Monitoring Project

Despite significant land-use pressures, Durham Region coastal wetlands are some of the best examples of Great Lakes shoreline wetlands remaining along the north shore of Lake Ontario. However, these wetlands have suffered from various impacts to varying degrees. Before attempting to restore any wetlands that are impaired, we need to identify the sources and levels of these impacts.

The Durham Region Coastal Wetland Monitoring Project was designed to provide standardized methods of monitoring biological communities such bird, fish, and amphibian populations and physical features such as water quality and water levels. The



study includes 15 coastal wetlands in this Region, eight of which are located in Central Lake Ontario Conservation's jurisdiction. Since 2002, staff, with help from volunteers, have been collecting data on these eight wetlands.

The fourth season of fieldwork was completed during 2005. This year's data are currently being analyzed and an update report will be completed in early 2006. Also in 2005, Central Lake Ontario Conservation Authority staff provided input and review of the Environment Canada report: "Durham Region Coastal Wetland Monitoring Project: Year 3 Technical Report" (2005). A "State of the Durham Coastal Wetlands" 5-year report will be completed following the 2006 field season.

Fish Tales

As part of the Durham Region Coastal Wetland Monitoring Project , eleven marshes were sampled in late August and early September to obtain fisheries information. Sites within each marsh were sampled using a capture method called electrofishing. Electricity is used to temporarily stun fish so that they can be netted, identified, weighed and measured. A flat-bottomed boat equipped with a generator, electrical boom and electrical control devices was used to collect various species of fish. By sampling the fish community over a number of years, biologists are able to monitor one aspect of wetland health and compare the condition of this biological community over time and among wetlands.



Authority staff collecting fish species data using the electrofishing boat.

Collecting Bugs To Monitor Watershed Health

In May 2005, Central Lake Ontario Conservation staff collected benthic macroinvertebrates from 18 stream locations across 8 watersheds as part of a long-term watershed health-monitoring program. "Aquatic bugs" play an important role in monitoring water quality within our watersheds. Depending on the types and numbers of invertebrates found, we can determine whether or not the watershed is experiencing any impacts from stresses such as pollution or higher water temperatures. This method of assessing water quality allows staff to survey larger areas and isolate stream sections that may need additional, more detailed and costly sampling such as chemical analysis.



Authority staff gather creek data.

Bowmanville/ Westside Marshes Conservation Area

Central Lake Ontario Conservation Authority's proposal for funding through the Ducks Unlimited Healthy Wetlands Healthy Communities program resulted in a grant to kick-off development on the former St Marys Cement lands between the Bowmanville and Westside Marshes in the community of Port Darlington. Work started with a spring planting event with local community volunteers. Over 2,000 trees and shrubs were planted to establish a wildlife corridor between the two marshes. Later in the year, a contractor was retained to complete 1.5 kilometres of hiking trail, an information kiosk, viewing mounds for each marsh, and a parking area. In 2006, after information and interpretive signs are installed, and trail work is completed, CLOCA plans to hold a public opening to officially launch this new Conservation Area.

Acting on a concern raised in the Durham Region Coastal Wetland Monitoring Project, shrubs and trees were also planted along the western and southern perimeter of the Bowmanville Marsh to provide a buffer from the adjacent roadway. Management planning continues for the greater Bowmanville/ Westside Marshes area to determine natural heritage values and public recreation opportunities for all the CLOCA landholdings in the Port Darlington community.



New trail construction at Bowmanville/ Westside Marshes.

Long Sault Conservation Area

The recommendations of the Long Sault Conservation Area Management Plan (CLOCA 2004) continued to be implemented with the completion of trail routes, signage and the thinning of red pine plantations. The changes to the area have been well received by the general public, who continue to find Long Sault C.A. a great retreat for hiking, biking, and skiing. Of note this year, black bear were sighted on the Long Sault trails several times during the summer of 2005.



Thinning of the red pine plantation.

Stephen's Gulch and Heber Down Conservation Areas

Preliminary data has been gathered for both Stephen's Gulch and Heber Down Conservation Areas. This data will form the basis for the future development of Conservation Area Management Plans. Trail improvements are in their initial stages at Stephen's Gulch Conservation Area and include efforts to restrict motorized vehicles from the area, hazard tree removal, and creek crossing upgrades. Heber Down Conservation Area has also experienced some minor development in 2005 including updating degraded boardwalks, removal of unsafe trail structures, and in-stream work adjacent to the Devil's Den Pond. The installation of a rock ramp along this stretch of the Lynde Creek will help to improve fish passage in the future.

Source Water Protection (SWP)

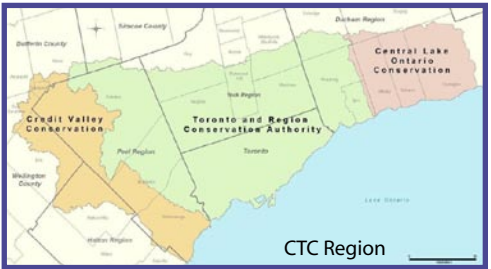
Source water protection means ensuring safe sources of drinking water, by keeping our creeks, lakes and groundwater healthy.

Source water protection is one component of a multi-barrier approach to protecting water. It is the first step to prevent contamination or depletion of our water resources. Other steps include: water testing and monitoring, reliable water treatment and distribution and training of water management staff.

Source Water Protection activities were initiated at the end of 2004 with the announcement of start-up Provincial source water protection funding. In 2005 CLOCA was able to acquire staff resources to write a watershed characterization report. The report consists of gathering information on the 15 major watersheds in the Authority's jurisdiction and identifying gaps in the information. Authority staff also hosted a workshop for our municipal partners to keep them informed on the work completed to date and the status of source water protection initiatives.

CTC Source Water Protection Group

The Central Lake Ontario Conservation Authority is partnered with our two western Authorities (Credit Valley and Toronto & Region) to form a source water protection group called CTC. The CTC group is currently working on the 2005-2006 (Aug 2005-June 2006) work plan goals as outlined by the Provincial Government. This year the Central Lake Ontario Conservation Authority's source water protection work will focus on the revision of our watershed characterization report, data collection/integration, groundwater and surface water modeling and water budgets.



York-Peel-Durham-Toronto (YPDT) Groundwater Initiative

The York-Peel-Durham-Toronto (YPDT) Groundwater Initiative was established in an effort to advance the understanding and management of the groundwater system across a large part of south central Ontario and ensure consistency in research. Members of the YPDT include the three regional municipal governments (York, Peel, and Durham) and the City of Toronto, and the nine conservation authorities located along the Oak Ridges Moraine.



Borehole Drilling Rig.

In 2005 the YPDT partnership maintained its focus on technical work to support good decision making regarding the management and protection of groundwater resources. Work focused on advanced subsurface investigations such as the mapping out of bedrock valleys and tunnel channels in Caledon East, Barrie, and Port Perry. Geophysical testing was done in 15 boreholes across the YPDT area to determine the geological profile of the ground the drill passed through. The geological model for the east (Durham Region) is scheduled to be completed in early 2006.

Groundwater Resources Inventory Project (GRIP)

The Groundwater Resources Inventory Project (GRIP) pilot project, funded by the Ministry of Northern Development and Mines (MNDM) was completed by CLOCA in 2004 as one of several reports that describe the groundwater systems and their interactions within individual watersheds. Each GRIP report contains a series of maps with basic hydrogeological mapping information of the watershed, along with a description of these maps within the watershed.

The completion of the project for CLOCA's jurisdiction in 2004 resulted in an expansion of the project in 2005 to cover additional conservation authorities in support of various provincial initiatives and legislative requirements.

Learning About The Environment

In 2005 the Central Lake Ontario Conservation Authority (CLOCA) implemented a new community outreach program to provide more services and increase communication with watershed residents. The program includes communications, community participation, environmental education, volunteerism, and special events, all focused to provide a better understanding of CLOCA's watersheds.

Education Programs

In 2005 more than 13,000 students from Kindergarten to Grade 12 discovered how their actions affected the watershed in which they live through the Authority's school environmental education program.

The education program consists of a series of programs and special events offered throughout the school year and is linked to the education curriculum guidelines. In September, the programs were redesigned to reflect the Authority's mandate of watershed protection and also designed to be presented in the classroom. Details of the programs are available on the Authority's web site

www.cloca.com.

Creek Water Safety Awareness

Launched in December of 2005, the Creek Water Safety Awareness program is a safety program offered free to students in Grades 4,5 and 6 within Central Lake Ontario Conservation's jurisdiction. Through discussion, video, games and a hands-on experiment, students gain an understanding of the dangers associated with playing near creeks in the winter and spring and how to avoid them. In the months of December 2005 and January 2006 the program will be presented to over 1,800 students.



Don't get too close!



The Durham Children's Groundwater Festival

The Durham Children's Groundwater Festival is an annual special event. In 2005, the festival was held during the week of September 26th to 30th at Camp Samac in Oshawa. The event was a great success with over 5,000 grade four students attending. Through interactive learning centres, students discover the importance of water in their lives and carry these messages back to their home and community. Since 1998 more than 32,000 grade four students have participated in the event and over 3,000 secondary students have participated as activity centre hosts. The festival conducted a successful sponsorship campaign and was able to subsidize the student admission by 60% (bussing included). The 9th Annual Durham Children's Groundwater Festival will be held at Camp Samac from September 25th to 29th. More information is available on the Authority's web site at www.cloca.com.



Summer Fun In the Conservation Areas

During July and August, CLOCA reintroduced free public environmental events for watershed residents in the conservation areas.

Nineteen events were scheduled that included nature hikes, bird watching, nature scavenger hunts, ecosystems and more. Many residents took advantage of the summer events and look forward to the 2006 summer event schedule.



Kids become human bird feeders during a nature hike at Lynde Shores C.A.

Loosestrife Bio-Control Workshop

In June 2005, Central Lake Ontario Conservation Authority (CLOCA) hosted a Purple Loosestrife Biocontrol Workshop at the Authority's Conference Centre. The Ontario Federation of Anglers and Hunters (OFAH) sponsored the workshop and Donna McKenzie from Ontario Beetles, led the discussion.

The workshop was a follow-up to a program initiated in 1999, whereby after much research, and in cooperation with Ontario Beetles, Authority staff released 5,000 *Galerucella* species beetles in Cranberry Marsh to combat the invasive Purple Loosestrife plant. To date, the beetles have become well-established in the marsh. While Purple Loosestrife still exists in the marsh, the reproductive ability of the plants has been

seriously compromised by the presence of the beetle. The young succulent leaves of the plant provide the diet of choice for the beetles. As a result, the plants expend their energy producing additional leaves and, therefore, never reach the flowering or seed stage.



Feeding damage to a Purple Loosestrife plant by the Galerucella Beetle.

The half-day workshop included a site visit to Cranberry Marsh where approximately 7,000 *Galerucella* larvae were collected for re-release at Heber Down Conservation Area to control a Purple Loosestrife infestation.

Aquatic Resource And Fisheries Management Plans

Aquatic Resource Management Plans (ARMPs) are underway for all of the watersheds in Central Lake Ontario Conservation Authority's jurisdiction. The Bowmanville/Soper and Oshawa Creek ARMPs are complete, and the Lynde Creek ARMP is currently undergoing final review. The Black/Harmony/Farewell Creek ARMP will be finalized in 2006 and the Small Watersheds ARMP will be drafted in 2006.

ARMPs summarize historical and current fisheries and aquatic data, and analyze this data in conjunction with other information such as water quality and stream-side land uses. Extensive sampling was completed in each watershed to ensure that the data is as up-to-date as possible. The ARMPs provide an approach to guiding land use planning, stewardship and aquatic monitoring within the Conservation Authority's watersheds to maintain and enhance the aquatic system. Fisheries and Oceans Canada assisted with funding of these undertakings over the past several years.

Central Lake Ontario Conservation, Department of Fisheries & Oceans (DFO), and the Ministry of Natural Resources (MNR) have expended considerable effort collecting extensive

background information to aid in the development of ARMPs for the Authority's jurisdiction. The stage has now been set to advance current and forthcoming ARMPs to the status of Watershed-Based Fisheries Management Plans (WBFMP) for a broad geographic region encompassing the fisheries resources of Lake Ontario.

Through a funding partnership with MNR and DFO, the Fisheries Management Plans will include consideration of aspects not considered in the ARMPs, including management actions for improving healthy fish communities and enhanced angling opportunities. Department of Fisheries and Oceans and Ministry of Natural Resources as well as local government agencies and naturalist groups are integral to the process. In 2005, the process was initiated and a final Fisheries Management Plan is anticipated for the end of 2006. Additionally, this partnership has facilitated improvements to our aquatics database that have been undertaken in 2005 and ongoing into 2006, that will further support our role in plan review, stewardship, and ongoing monitoring of the aquatic resources in CLOCA's jurisdiction.

Nature & Computers

Natural Heritage and Geographic Information System (GIS)

Central Lake Ontario Conservation is continually collecting and updating information about our local watersheds. Data collected in the field and other sources of information are readily made available using computer programs and are displayed on new 2005 air photography. This information gives staff a quick reference to be able to visually interpret the land cover in our jurisdiction. A database that holds all the natural heritage information is continually updated and provides easy access for users needing information about our local environment.

Furthermore, Central Lake Ontario Conservation began to develop a terrestrial natural heritage model for our jurisdiction. Many different ecological and political influences were taken into consideration, and refinement will continue to take place in 2006. Once completed, this model will allow staff to target areas for further restoration, protection, and enhancement.

In addition to the natural heritage projects, the Information Systems/Geomatics Department was involved in or completed several other important projects. The Generic Regulations project resulted in a digital boundary, which illustrates where Central Lake Ontario Conservation regulates for planning, engineering, and natural heritage purposes. Digital data was restructured and is now available for staff and partners who are looking for information created in-house (for example Conservation Area land boundaries, and Ecological Land Classification polygons).



Computer screens showing a database and GIS working together.

Finally, various types of Management Plans remain a priority for Central Lake Ontario Conservation. Figures were created for the Lynde Creek Watershed Management Plan. Mapping was also completed for several property acquisition projects. Upcoming projects for 2006 include the Bowmanville/Soper Watershed Management Plan, and the Black/Harmony/Farewell Aquatic Resource Management Plan.

See Us On The Web

In April 2005 Central Lake Ontario Conservation launched a new web site format. Redesigned from the ground up, the new site format was designed to be easy to navigate and contains many new features such as a library, online registrations, online ordering, homeowner information, wildlife registry and more.



Over the past year, there were more than 41,700 visits to the site and over 198,000 pages of information downloaded.

The conservation area section leads the way in visits as watershed residents download trail maps and brochures to plan their outings.

www.cloca.com

30th Anniversary

Maple Syrup Festival

The annual Maple Syrup Festival at Purple Woods Conservation Area celebrated its 30th Anniversary in 2005. The Festival was held from March 12 – 20 and the weekend of March 26,27.

Approximately 9,000 visitors attended the Festival with young families making up the majority of the visitors. Those attending the Festival were able to see how syrup was made over 400 years ago to modern methods of today. Many special attractions were also added that included horse-drawn wagon rides, kids face painting, colouring contest, crafts and more.

