2004 Year In Review

Central Lake Ontario Conservation

Member of

Conservation ONTARIO
Natural Champions

Table of Contents

Welcome Message from the Chair

It is with great pride that I present the 2004 Year–In-Review Report of Central Lake Ontario Conservation. Completing my first year as Chair of the Conservation Authority has been a great experience and I would like to express my appreciation to the staff and Board of Directors for their hard work and support in 2004.

As you read through the document you will see the many accomplishments and ongoing projects of this organization over the year. Many of these projects would not be possible without the support of our community partners: Region of Durham, member municipalities, environmental organizations and the watershed residents. Working in partnership for healthy watersheds protects valuable natural resources for present and future generations.

The next year will be full of challenges as conservation authorities across Ontario take the lead on source water protection. Central Lake Ontario Conservation will work with the municipalities to implement the Provincial Greenbelt Strategy and continue to partner with Durham Region on the Oak Ridges Moraine Conservation Plan.

If you have any questions or would like to get involved in one of the many environmental programs undertaken by Central Lake Ontario Conservation I would encourage you to contact staff at the administration office.

Jim Schell
Chair, Central Lake Ontario Conservation

2004 Board of Directors

Chair: Councillor Jim Schell, Municipality of Clarington

Vice-Chair: Councillor Pat Perkins, Town of Whitby

Town of Ajax: Councillor S. Crawford
Municipality of Clarington: Councillor P. Pingle, Councillor J. Schell
City of Oshawa: Councillor C. Clarke, Mayor J. Gray, Councillor J. Kolodzie, Councillor J. Neal
City of Pickering: Councillor M. Brenner
Townships of Scugog & Uxbridge: Mayor M. Pearce
Town of Whitby: Councillor J. Drumm, Councillor G. Emm, Councillor P. Perkins

Watershed Planning – Protecting Water Resources

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. Watershed planning has been an activity that Central Lake Ontario Conservation has carried out in partnership with Durham Region, other member municipalities, and watershed communities for a number of years. These plans examine the existing health of watershed resources and provide a series of recommended actions to be taken to maintain and improve this health in the future. Watershed plans have been initiated on all of the fifteen watersheds within the Authority's jurisdiction. Their status of completion varies depending on watershed.

Central Lake Ontario Conservation is now working with Durham Region to ensure that these exercises meet the watershed planning requirements of the Oak Ridges Moraine Act and Conservation Plan (ORMCP) Regulation (O.Reg. 140/02). The ORMCP (s. 24) requires Durham Region to:

- initiate the preparation of watershed plans by April 22, 2003 for each of its watersheds whose streams originate within Durham Region;
- incorporate the watershed plan's requirements into the Region's Official Plan; and
- complete the watershed plans and ensure all major development conforms with the plan, before approving any major development application that is commenced on or after April 23, 2007;

Central Lake Ontario Conservation is committed to assisting Durham Region in fulfilling its requirements under the ORMCP.

A workplan has been developed to complete/ update all watershed plans within the time frame.

During the summer field season staff collected wildlife habitat data in the Bowmanville and Soper Creek watersheds and conducted fluvial (stream movement) assessments through the urban portions of the watershed. Digital mapping of habitat data and existing land uses within the watershed is underway. This information together with other recently collected natural heritage data will become the basis for the Existing Conditions report for the watershed.

Data collection and mapping have been completed within the Lynde watershed. This data as well as additional information has been compiled to develop an Existing Conditions report for the watershed. A draft of this report is presently under review.

Draft Provincial Greenbelt Plan

In the fall 2004, technical comments, from a watershed perspective, were provided to the Ministry of Municipal Affairs and Housing in support of the proposed establishment of a permanent Greenbelt throughout the Golden Horseshoe.

The Province was encouraged to provide strong Provincial policy to halt the spread of urban footprints within our watersheds and protect the natural environment and countryside.

The Plan, as drafted, affords sufficient protection to our easterly watersheds. However, rural lands in our westerly watersheds, currently acting as an urban separator between Whitby and Ajax-Pickering, would not be captured but remain exposed to continuing pressures for development.

Strong policies directing remediation and enhancement of our westerly watersheds are needed. For example, the woodland coverage in the Lynde Creek (9%) and Oshawa Creek (7%) watersheds fall far short of Environment Canada's target of 30% to sustain ecological and human health. The potential to achieve this target, will exist if the land remains rural, but will be lost forever if it is urbanized.

The Legislature's Standing Committee on General Government is presently conducting final public consultation sessions. It is anticipated that the final Greenbelt Plan will be released prior to expiry of the temporary development moratorium on March 9, 2005.

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.

<u>Statistics for 2004</u>:

- 405 new planning files were created (a total of 810 pieces of correspondence)
- 175 requests for information (verbal and written) regarding properties within the watershed
- 285 occurrences under the Fill Construction and Alteration to Waterways Regulation that include both permits and violations

Office Opening

On September 23, 2004, Central Lake Ontario Conservation opened the new addition of the Administration Office along with the renovation of the old office space at 100 Whiting Avenue, Oshawa. The new office layout provides a more efficient space for staff to better serve watershed residents. At the opening ceremony, delegates were piped in and a town crier officially declared the office open for the betterment of the environment.

Official Opening - September 23, 2004
(L - R) Piper Kelsey Symington, Past Authority Chair 1998-2003 Councillor Rick Johnson, City of Oshawa Mayor John Gray, Authority Chair 2004 Councillor Jim Schell, Region of Durham Chair Roger Anderson, Authority C.A.O. Russ Powell, Town Crier Fred Martin.

Conservation Authority Moraine Coalition (CAMC)

In 2004, Conservation Authorities within the Conservation Authorities Moraine Coalition (CAMC) planted more than 181 acres in trees, created/ restored more than 3.5 acres in wetlands, completed various stewardship projects and secured over 2,000 acres of environmentally sensitive land on the Oak Ridges Moraine.

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 have taken a big step towards uniting efforts to conserve and protect the Oak Ridges Moraine and ultimately sustain a source of safe drinking water in Ontario.

Out In The Watershed

In 2004 Central Lake Ontario Conservation staff were busy in the community promoting the Conservation Authority's programs and services along with assisting with various environmental projects. Staff participated through displays at local fairs/events, attending requests for public speaking on a variety of topics, assisted with community environmental events, conducted natural heritage inventories and provided landowners with assistance in stewardship projects.

Moraines act like great sponges, absorbing and storing rain water and snow melt, which is later released from streams to river headwaters.

The Oak Ridges Moraine is the source for 65 streams, creeks and rivers and provides water for some 250,000 people.

Landowners Enhancing Watersheds

Initiated during the spring of 2004, Central Lake Ontario Conservation's Clean Water Stewardship Program (CWSP) is designed to enhance the health of the watersheds by assisting private landowners in implementing environmental projects. Projects include: water quality improvement and protection; water conservation and quantity management; enhancement and protection of wetlands, fish and wildlife habitat, creeks and riparian areas; forests, woodlots and windbreaks, soil conservation and land management.

Primarily, CWSP provides landowners with technical assistance and project grants through two main program areas, 1) Water Quality Improvement Program, and 2) Tree Sales and Planting Program. These programs endeavor to integrate Central Lake Ontario Conservation's ongoing watershed planning with the landowner's desired objectives for their property by supporting 'on-the-ground' rehabilitation projects. Our efforts in identifying stewardship projects are focused on areas in need of rehabilitation as discovered through recent Authority Watershed Management Planning or Aquatic Resource Management Planning. Projects are implemented in partnership with other agency rehabilitation programs where possible.

The CWSP was advertised in local papers through the Tree Seedling Sales initiative. Additionally, program information has appeared in Ontario Federation of Agriculture and Canadian Auto Workers publications.

Projects in 2004 included water well upgrades/ decommissioning, alternative watering systems and stream crossings for livestock, habitat restoration, erosion control of farmland and a tree planting program (16,000 trees in 2004).

Pit Water Well Upgrades - Prevents contamination of groundwater from surface water.

Before

After

Livestock Stream Crossings - Reduces disturbance of stream habitat.

Before

After

Conservation Area Management Plans

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 time) 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 Authority 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.

In 2004 the Authority Board approved the Long Sault Conservation Area Management Plan and interim management plans have been developed for Crow's Pass Conservation Area and Rahmani Tract.

2004 Long Sault Conservation Area Management Plan Objectives

- Restructured trail entrance and kiosk signage and information.
- Retiring a section of trail that passed through a very sensitive coniferous swamp and rerouting it through a less sensitive area.
- Connecting the east and west sections of Long Sault Conservation Area with a new trail.
- Reorganization of the trail loops and directions of travel for both mountain bikers and hikers.
- Developing new trail signage standards in order to provide a level of consistency and reduce confusion.
- Developing a partnership with the Oak Ridges Trail Association and re-routing the Oak Ridges Trail through Long Sault Conservation Area.
- Discussions with the Clarington Emergency and Fire Services regarding the development of an emergency strategy for Long Sault Conservation Area in case of a medical or fire emergency.
- Discussions with Hydro One regarding the management of the ground cover within the hydro corridor that runs through the Conservation Area.
- Some red pine plantations within the Conservation Area have been marked for thinning. Proper thinning of the plantations will open up the canopy and increase the plant diversity in the under-storey.
- General removal of garbage.

Hampton Conservation Area – Pond and Wetland Creation

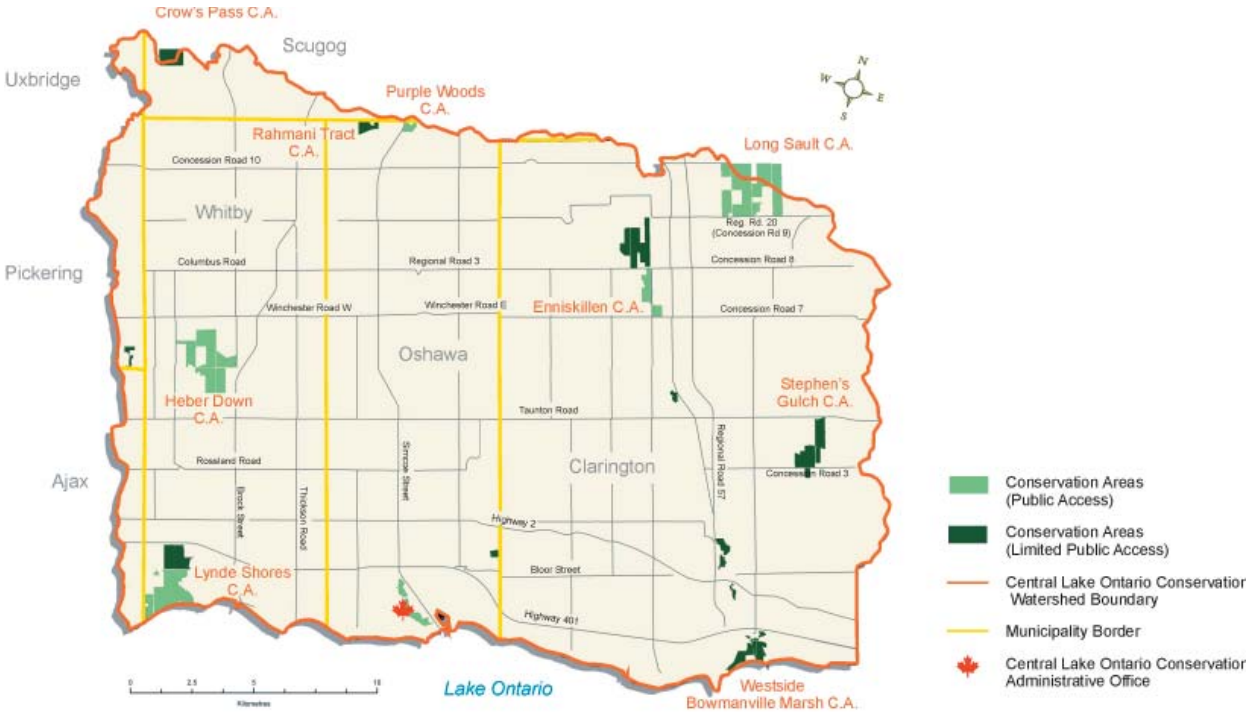
This project will return an aesthetic feature to the community of Hampton, and has received considerable public comment and approval. The plan includes an open water pond, wetland pockets, and a trail system that will link the old Mill Pond area to existing park facilities on the east side of the Bowmanville Creek. The plan will provide improved wetland habitat, and improved riparian conditions for Bowmanville Creek. The Hampton Citizens Association continue to raise funds for the construction of the pond/wetlands with assistance from funding programs such as the Wetland Habitat Fund, EcoAction Fund, and The Ontario Trillium Foundation.

Volunteer Groups Active in Conservation Areas

Volunteer groups have been active in our conservation areas throughout 2004. On June 15, Central Lake Ontario Conservation, in partnership with the Durham Region Field Naturalists and Ontario Nature, hosted a Volunteer for Nature event at the Crow's Pass Conservation Area. The event, entitled "Taking Stock", helped the Conservation Authority with the large task of inventorying the plant species that are present on the property. A similar natural heritage inventory event is expected to take place in June 2005 on newly acquired lands near the village of Enniskillen. An accurate plant inventory is important prior to the development of a management plan for the property.

Students and adults at the annual Purple Woods Maple Syrup Festival registered over 700 hours of volunteer service. Volunteers enjoyed flipping pancakes, staffing historical displays and running various activities.

Environmental Assistants Program (EAP)
The Environmental Assistants Program in partnership with Durham Region Social Services assisted field staff with projects and labour support in the Conservation Areas. The crews were especially helpful with set-up, parking and clean-up during large events such as the Children's Groundwater Festival and the Maple Syrup Festival. The Assistants also provided significant help with general maintenance, trail improvements, and forest management activities.

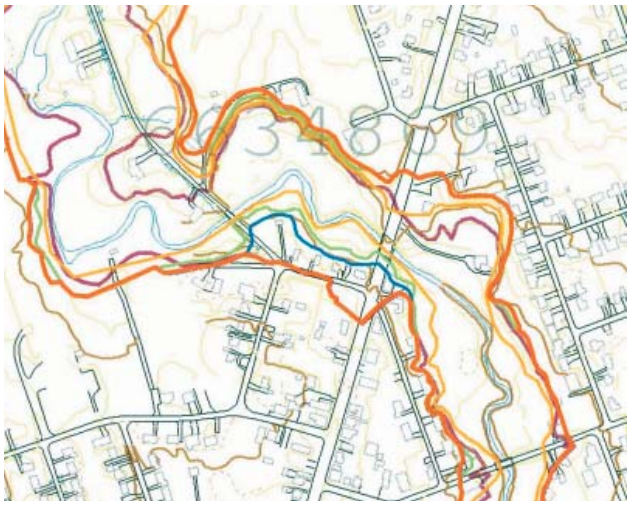


Land Protected For Future Generations

Land acquisition was a major focus in 2004 with 565 acres of environmentally sensitive land being brought under ownership of the Central Lake Ontario Conservation Authority. External organizations that assisted the Authority in the purchase of these lands and other stewardship projects include the Region of Durham, Ministry of Natural Resources, Ministry of the Environment, Oak Ridges Moraine Foundation, Ducks Unlimited, Ontario Power Generation and the Town of Whitby.

Hazard Mapping / Regulation Mapping

In conjunction with the provincial criteria for delineation of hazard lands, new mapping is nearing completion for the Central Lake Ontario Conservation watershed. These maps will form the basis for establishing the regulated areas under the new Generic regulation process. Public meetings will be held across the Conservation Authority watershed early in 2005 to present the proposed regulation limit mapping to the general public.



Measuring water clarity (turbidity) at Cranberry Marsh.

Floodplain Mapping Studies

Several floodplain mapping exercises were advanced during 2004 including the Corbett Creek Flood Plain Mapping project and the Goodman/ Oshawa Creek Two-Zone Study. Updating these maps helps the Authority to identify flood vulnerable areas and direct development away from floodplain. These projects will be completed and presented to the public in 2005.

Windbreaks around homes can be shields against wind and snow and heating costs can be reduced by as much as 30 percent.

Protecting Fish Habitat

Central Lake Ontario Conservation Authority is a partner with the Department of Fisheries and Oceans Canada (DFO) to administer section 35(2) of the federal Fisheries Act. This section of the Act ensures that there is no net loss of fish habitat in Canada. To protect fish habitat the Authority, on behalf of DFO, reviews any work that takes place near water within the Conservation Authority's jurisdiction.

In 2004, Central Lake Ontario Conservation Authority reviewed more than 50 projects under the Fisheries Act with the potential to affect fish habitat. Working with engineers and biologists at both DFO and the Ministry of Natural Resources, these projects were evaluated to ensure that the best science and techniques were used to conserve and enhance fish habitat.

1980 - Hampton Flood.

Bowmanville Creek Restoration Project – Van Stone Mill Reach

The Environmental Study Report has been completed, and provides a conceptual plan to deal with the changing channel form of the Bowmanville Creek through the community of Bowmanville. Subsequent to the failure of the Van Stone Mill Dam, significant erosion is creating concern for utilities and public safety, while downstream sedimentation is creating economic hardship on a local industry. This comprehensive study has examined alternative solutions to the problem with consideration to the environment, social concerns, and economics. Subsequent work will be required to provide detailed design and construction of proposed solutions. A consultant team completed the study with public input at stakeholder and public information meetings. Central Lake Ontario Conservation and the Municipality of Clarington jointly funded this project.

Van Stone Mill Dam after the flood in 1986.

Whatever happens upstream in a watershed affects the conditions downstream.

Helpful and harmful actions can accumulate over time, causing a greater impact downstream.

Natural Heritage Discussion Group

Conservation Authorities have organized to insure the compatibility of Natural Heritage Programs across Southern Ontario. A uniform method of collecting and analysing data on natural heritage features and functions has been developed by the GTA's Conservation Authorities to enable Authorities to easily share data and provide municipalities with the science they require to make good planning decisions. The group of Conservation Authorities representing those with involvement in the GTA began talks in 2001 on how they could assist each other, and this group now includes representatives from the entire Conservation Authorities Moraine Coalition (CAMC).

The primary purpose of the group is to be a forum for information exchange on natural heritage issues, techniques in data collection, mapping and analysis, and 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 Authorities' jurisdiction. With a membership that includes (at minimum) the 9 Conservation Authorities that touch the Oak Ridges Moraine, our role can include working with the CAMC in an advisory capacity, while maintaining involvement with other groups in broader initiatives.

Central Lake Ontario Conservation has participated in this group throughout 2004 and now Chair a sub-committee formed to examine issues involved with invasive species.

Working In Partnership For Healthy Watersheds

Everyone lives downstream 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 2004, Central Lake Ontario Conservation Authority partnered with the Durham Land Stewardship Council to conduct several wetland evaluations across the Authority's jurisdiction. Many of these wetlands will be designated Provincially Significant and therefore be protected under Provincial Policy.

The Wetland evaluations were completed in 2004 and available in print in early 2005. The majority of the wetlands evaluated in 2004 were located along the remnant Glacial Lake Iroquois Shoreline. Wetlands that have been included in the recent evaluations within the Authority's jurisdiction are: Taunton North Planning area (Whitby), Northwoods Planning area (Oshawa), Port Darlington Marsh (Clarington), Whitby Harbour (Whitby), Tooley Creek (Clarington).

Collecting Bugs To Monitor Watershed Health

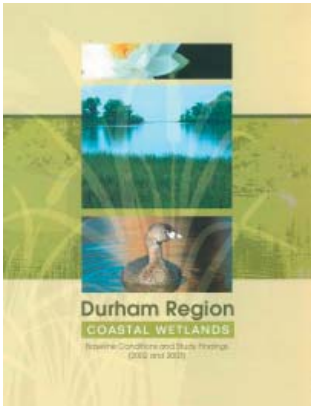
In May, Central Lake Ontario Conservation staff collected benthic macroinvertebrates from 17 stream locations across 5 watersheds as part of our long-term watershed health-monitoring program. "Aquatic bugs" play an important role in monitoring water quality within our watersheds. Depending on the types 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.

Westside/Bowmanville Marsh Conservation Area Management Plan

With the recent renovation of Westside Marsh and land acquisition from St Marys Cement, Central Lake Ontario Conservation and Municipality of Clarington staff are completing a draft Management Plan for the Bowmanville/ Westside Marshes. The Plan will adopt comments from public meetings, environmental studies, and coastal studies completed for the area. Construction of habitat features within Westside Marsh are near completion, and diversion of the Westside Creek will be completed after the newly constructed channel has sufficiently grown-in. Newly constructed nesting platforms successfully attracted osprey to the Westside Marsh in 2004. 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 Westside/ Bowmanville Marsh Conservation Area.

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 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 our eight wetlands, which have been incorporated into two documents produced in 2004 in conjunction with Environment Canada and neighbouring Conservation Authorities: Durham Region Coastal Wetland Monitoring Project: Year 2 Technical Report; and a user-friendly 36-page fact booklet, Durham Region Coastal Wetlands – Baseline Conditions and Study Findings.

In general, all Durham coastal wetlands were found to be impaired in at least one of the biological communities that were studied. More details on results from 2002-2003 can be found in the fact booklet that is available from Central Lake Ontario Conservation.

The third season of fieldwork was completed during 2004. This year's data are currently being analyzed and an update report will be completed in early 2005.

Wetlands are important for watersheds. They store extra water and release it slowly; they prevent flooding; they filter out contaminants in the water and they provide habitat for fish, mammals and birds.

Fish Tales

As part of the Durham Region Coastal Wetland Monitoring Project (DRCWMP), four marshes were sampled in late August 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.

Electrofishing boat in Bowmanville Harbour.

Water Monitoring

The Water Monitoring Network consists of 16 groundwater wells, 11 stream flow monitoring stations, and 8 precipitation-gauging stations strategically located throughout the watershed. The system allows conservation staff to monitor, analyse, and predict both short-term issues such as potential flood events, and longer-term issues such as low water (drought) conditions.

One of 11 stream flow monitoring stations.

This year, we continued to see a trend towards more frequent and intense rain events. Weather and stream conditions warranted the issuance of 8 Flood Safety Bulletins and 2 Flood Advisories in 2004. Thankfully, only minor flooding of low lying areas was experienced in our watershed, although the Peterborough flood event was a good reminder that a large event can happen at any time. Central Lake Ontario Conservation meets with our Conservation Authority neighbours as a member of the GTA Flood Forecasting and Warning group, ensuring that our flood warning operation provides a consistent service across Durham Region.

The Low Water Response Project continues to operate in cooperation with the Ministry of Natural Resources. Our monitoring system showed that our watershed, on average, received average amounts of precipitation until August, when we fell below 80% of the long-term average rainfall for the month. This low water condition continued through November, with only 50% of the normal precipitation falling over September, October and November.

Conservation Authority staff taking a water sample from one of the 16 monitoring wells.

Watershed monitoring also involves water sampling and water quality analysis. Central Lake Ontario Conservation conducted surface water (chemical) quality monitoring in cooperation with the Ministry of Environment at nine sites throughout the watershed, and is developing baseline sites for biological water quality sampling. All of this information will be used to establish a Watershed Report Card that will be used for reporting watershed health to the residents. This program boils down watershed monitoring data to a simple, understandable report card format, concentrating on key issues. Report Cards will be produced every 5 years to track the success or failure of efforts to protect and enhance the health of our watersheds.

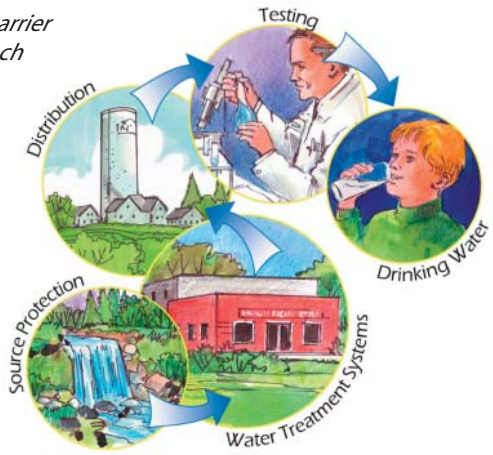
More than 70 species of fish have been documented in the fifteen watersheds within the jurisdiction of Central Lake Ontario Conservation.

Watershed-Based Source Protection Planning (SPP)

Source protection is just one of many barriers in a "multi-barrier approach" to ensure safe drinking water before it enters water treatment systems. Protecting water at the source is necessary in order to maintain a healthy community and to provide a clean and safe environment for future generations.

SPP activities were initiated at the end of 2004 with the announcement of Provincial SPP funding. Currently region-based work plans are being prepared, with Central Lake Ontario Conservation being part of the CTC group that includes Credit Valley Conservation and Toronto and Region Conservation.

Multi-barrier Approach



Alternative Energy Display

With funding provided by Oshawa Power and Utilities Corporation, Central Lake Ontario Conservation assembled an operational Solar Powered Water Pumping System Display that was designed for use at public demonstrations, open houses and presentations. The system/display was used during the five day Durham Children's Groundwater Festival. Further Enhancements to the display are planned for 2005.

A similar solar powered water pumping system was subsequently purchased for use at the Willowbrook Farm site, where a cold water stream is being fenced, and the alternative watering system will provide water for the cattle instead of the cattle accessing the creek.

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

Central Lake Ontario Conservation is one of several agencies involved in the YPDT groundwater initiative that are committed to working together in the management and protection of groundwater resources.

A number of new projects were initiated in 2004, such as the development of a partners web site for the YPDT group, the formulation of watershed management polices, continued technical analyses (seismic, drilling, etc.), and completion of the Geological Model for the study area (east – Durham and west – Peel).

Groundwater Resources Inventory Project (GRIP)

The GRIP project, funded by the Ministry of Northern Development and Mines (MNDM) and completed by Central Lake Ontario Conservation in 2004 is 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. It is expected that Central Lake Ontario Conservation's GRIP report will be published by the MNDM in early 2005.

Solar Powered Water Pumping System Display at the Durham Children's Groundwater Festival.

Learning About The Environment

In 2004 more than 9,300 students from Durham Region discovered how their actions affect the watershed in which they live though the Authority's environmental education programs. Programs are offered by the Education Department throughout the year and include: pond/stream explorations, survival game, insect studies, plants, trees, soils, water cycle, hikes and sugar bush tours.

Tomorrow's decision makers learning about the environment.

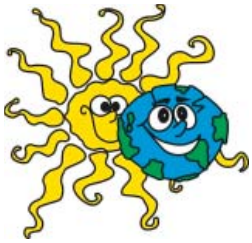
Durham Children's Groundwater Festival

Held during the week of September 27 to October 1 at Camp Samac, the 7th annual Durham Children's Groundwater Festival was a great success. This past year more than 4,600 grade four students attended the Festival. The Groundwater Festival teaches students the importance of water in their lives and how they interact with the watershed in which they live. To date more than 25,000 grade four students have visited the Festival and over 2,200 secondary students have participated as activity centre hosts. The Festival conducted a successful sponsorship campaign and was able to subsidize the student admission fee by 60% (bussing included).
The 8th annual Durham Children's Groundwater Festival will be held at Camp Samac from September 26 to September 30, 2005.

Maple Syrup Festival

The 29th Annual Maple Syrup Festival was held at Purple Woods Conservation Area from Saturday March 13 – 21 and the weekend of March 27,28. Approximately 7,000 visitors attended the Festival with young families making up the majority of the visitors. Visitors to the Festival were able to see how syrup was made over 400 years ago to modern methods of today. The Festival's forum is the wise use of a renewable resource. Many special attractions were also added that included horse-drawn sleigh rides, kids face painting, colouring contest, crafts and more.

Earth Keepers Environmental Day Camp



The Earth Keepers Environmental Day Camp was held at the Enniskillen Conservation Area operated weekdays in July and August. This past summer 305 campers attended over an eight-week span. The day camp offers children the opportunity to learn about the environment in a natural setting. Campers explore plants, trees, insects, pond and stream life, survival skills, and orienteering. The day camp will not be running in 2005 as various family program events will replace the camp.

Plastic pipelines takes the maple sap to the Sugar Shack.

Lynde Shores Conservation Area

Cranberry West
A looping trail system and picnic area were completed at the Cranberry West Tract adjacent to the Lynde Shores Conservation Area. In partnership with the Whitby District Scouts and the Town of Whitby an additional 6,000 trees were planted to complete the reforestation efforts that commenced in 2003. Ongoing work on the site will insure safe access for the public while protecting the area's natural features.

Lynde Shores and Cranberry Marsh
Hard surfaced trails and viewing mounds were completed in 2004 to complete the work recommended through the Lynde Shores Management Plan. This Area continues to have the greatest amount of public use, and provides recreation for people of all ages with disabled access and washroom facilities.

Trees reduce Greenhouse Effect. Trees can absorb CO_2 at a rate of 13 pounds per year. Trees reach their most productive stage of carbon storage at about 10 years.

Cranberry Marsh In Great Health

In keeping with the recommendations of the Cranberry Marsh Management Zone Strategy (Central Lake Ontario Conservation, 2000), water levels in the marsh were monitored in 2004 and adjusted throughout the growing season to promote optimum growing conditions. Water level management in the marsh is achieved through a stoplog structure that was installed in 2001 through a partnership with Ducks Unlimited. The structure is located along the barrier beach separating the marsh from Lake Ontario. This separation allows conservation staff to maintain the water in the marsh at a different level than that of Lake Ontario. Proper vegetation coverage in the marsh provides valuable habitat for wildlife and also contributes to better water quality entering Lake Ontario.

Valleys 2000

Central Lake Ontario Conservation continues to work with the Municipality of Clarington and Valleys 2000 in the development of a public trail system within the Bowmanville Creek valley system. New trails have been constructed and plans are under review for pond features to be developed in the valley.

Aquatic Resource Management Plans

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

The Aquatic Resource Management Plans summarize historical and current fisheries and aquatic data, and analyze these 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 are as up-to-date as possible. Recommendations tailored to each watershed are then made to ensure that the aquatic resource is protected and enhanced wherever possible.

Water control structure on south end of Cranberry Marsh.

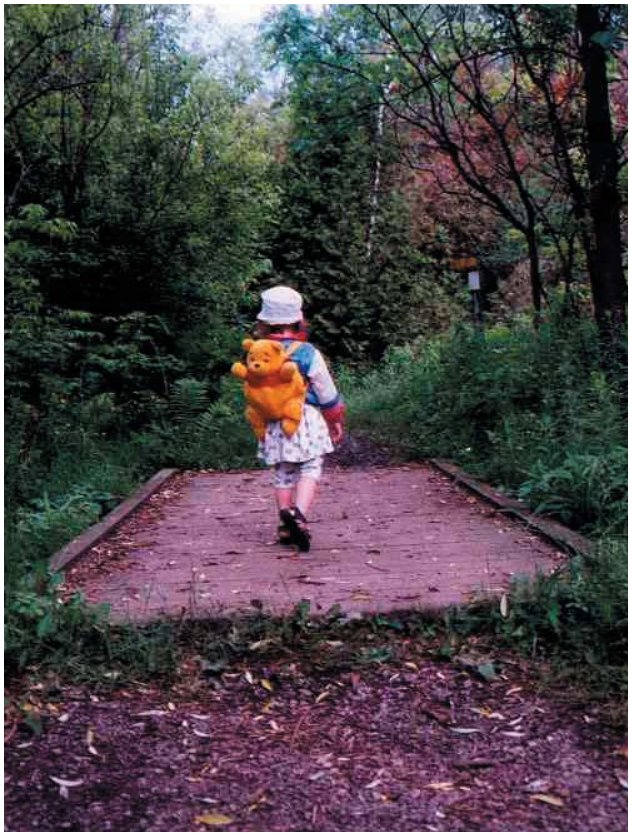
See Us On The Web

In 2004 more than 24,800 visitors were received on the home page of Central Lake Ontario Conservation's web site. The Conservation Area section leads the way in visits as watershed residents wish to download trail maps and brochures. Staff are currently redesigning the web site to meet the needs of our watershed residents. The new web site is scheduled to be launched in the spring of 2005.

www.cloca.com

Trees give people a multitude of recreational opportunities and provide habitat for wildlife.

Trees along rivers, streams, and lakes reduce water temperatures by their shade, prevent or reduce bank erosion and silt, and provide hiding places for improving fisheries habitat.

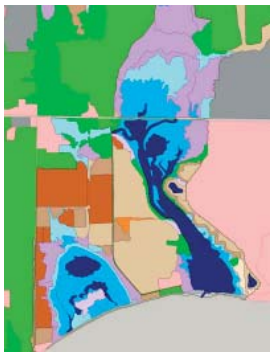


Hiking along the trail at Enniskillen Conservation Area.

Nature & Computers

Natural Heritage and Geographic Information System (GIS)

Central Lake Ontario Conservation has collected extensive natural heritage information for all the watersheds. Natural Heritage data and mapping standards have been defined and Central Lake Ontario Conservation is working in conjunction with other Conservation Authorities to develop a consistent approach to natural heritage data collection, analysis, and reporting throughout the Oak Ridges Moraine, and across the GTA. Central Lake Ontario Conservation has also signed an agreement with the Natural Heritage Information Centre (NHIC) of the Ministry of Natural Resources, to be able to access and exchange information about species at risk in the Province. This partnership will enhance our ability to identify potential habitats of species at risk and ensure up to date information is available for municipal planning purposes.



In 2004 the Authority completed a jurisdiction-wide update of its mapping of natural and land use cover using the Ecological Land Classification System. Updates have also been completed to the watercourse information, and all streams have been segmented into reaches with similar physical and biological characteristics. Core areas, corridors, and linkages have been mapped within the Oshawa and Lynde watersheds and are being completed within the Bowmanville/Soper watershed. Consistent and reliable mapping and data base systems are critical to watershed decision making.

Enniskillen Conservation Area

Significant portions of the Enniskillen CA boardwalk system were replaced and rebuilt during 2004. The Environmental Assistants Program provided the labour to complete this project.

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