



Oshawa Creek Cleanup - Pg 8

2006 Year In Review

Working In Partnership For Healthy Watersheds



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What we do on the land is mirrored in the water.

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Welcome Message from the Chair

It is with great pride that I present the 2006 Year In Review Report of the Central Lake Ontario Conservation Authority (CLOCA). Working in partnership for healthy watersheds summarizes the Authority’s mandate. When you look over the past year, one can see how closely CLOCA works with a variety of community stakeholders to achieve local and regional environmental benefits for our constituents

I would like to take a minute to highlight some of the projects and achievements in 2006:

The Hampton Pond Restoration Project was officially opened on Earth Day in April and returned a beloved natural feature to Hampton residents. The project consisted of the reconstruction of the pond and wetland to enhance and create wildlife habitat in the area. Authority staff worked with the Hampton Citizen’s Association and Municipality of Clarington to secure funding and provide technical expertise in the design, planning and implementation of the project.

The Bowmanville/Westside Marshes Conservation Area was officially opened in June, located at the south end of Clarington. The new area hosts various wildlife viewing facilities, two Provincially Significant Wetlands, interpretative signage and 1.5 kilometres of trails. This project would not have been possible without the support of Ducks Unlimited, the Municipality of Clarington, St Marys Cement and the Ontario Ministry of Natural Resources. It is already proving to be a popular site for watershed residents.

Working with the Oak Ridges Trail Association, 2.6 kilometres of the Oak Ridges Trail was rerouted through the Purple Woods and Rahmani Tract Conservation Areas in the City of Oshawa. The new route increases safety for trail users along with access to spectacular views of the Authority watershed from the top of the Moraine.

In May 2006 the Conservation Authorities Generic Regulations came into effect with all 36 Conservation Authorities meeting the deadline. I would like to commend our staff for a job well done as our Central Lake Ontario Conservation was the lead Authority in the Province for this project and the first to have their regulations approved by the peer review committee last February. The new regulation gives more protection to wetlands that are vital to water quality in our watersheds.

CLOCA’s stewardship and outreach activities continued to grow in 2006. This past year over 40,000 tree seedlings were planted through the Authority’s stewardship program and another 18,000 sold to private landowners. Authority

staff continued to meet the public by participating in over 15 community events, leading family summer programs, assisting at the International Plowing Match and hosting a public volunteer appreciation evening and community environmental fair.

Over 13,000 students from Durham Region participated in CLOCA’s environmental education programs including the Durham Children’s Groundwater Festival, Purple Woods Maple Syrup program and day programs in local schools and conservation areas.

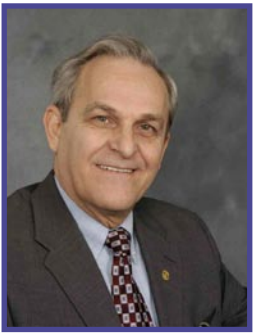
Land acquisition around CLOCA’s holdings on the Oak Ridges Moraine continued in 2006 with approximately 490 acres added to Enniskillen Conservation Area and 120 acres added to Long Sault Conservation Area. Both of these areas are now over 1,000 acres in size. The Authority continues to receive strong support for this initiative from the Region of Durham, Oak Ridges Moraine Foundation and the Nature Conservancy of Canada .

With the passing of the Clean Water Act this past October, Source Water Protection will be a major focus in 2007 with the establishment of source protection areas and regions, source protection committees and the terms of reference for the planning process. The Drinking Water Stewardship Fund announced in September is particularly significant, since it is established in legislation that the province accepts some responsibility for funding implementation of projects to support the Clean Water Act. We are very pleased to have Russ Powell, CAO of CLOCA, as one of the Conservation Ontario representatives on the advisory panel.

The above projects would not be possible without the support of our community partners: Region of Durham, member municipalities, environmental businesses and watershed residents. It has been a pleasure to participate in the organization since 2001 and hold the position of Chair. I wish you all the best in 2007.

Sincerely,

Jim Schell
Chair, Central Lake Ontario Conservation



Source Water Protection (SWP)

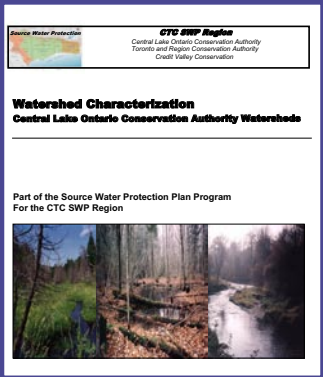
As a result of Ontario’s increasing population growth and a growing demand for limited resources, watershed managers today face increasing challenges in balancing human, economic and environmental interests. To help strike this balance, the Ontario government has introduced the Clean Water Act which aims to protect drinking water at the source.

The Clean Water Act requires every watershed in Ontario to form a Source Protection Committee and create a Source Protection Plan to protect their water resources. Conservation Authorities across Ontario are responsible for forming these committees and coordinating the development of these plans, as well as providing some of the technical expertise that will be needed to map out the best way to protect water in our watersheds.

A key requirement of the Clean Water Act is creating a science-based Assessment Report for each watershed. These reports have eight modules: Watershed Characterization, Water Budgets, Municipal Water Supply Strategies, Groundwater Vulnerability Analysis, Surface Water Vulnerability Analysis, Threats Inventory and Issues Evaluation, Water Quality Risk Assessment and Water Quantity Risk Assessment.

Central Lake Ontario Conservation Authority (CLOCA) staff completed the first module of the assessment which is the Watershed Characterization Report. This first report of the program is aimed at summarizing and collecting all of the existing information and mapping relating to Source Water Protection for the watersheds within the Authority’s jurisdiction.

The basic objective of the first phase is to analyse what information is available, and assess what additional information or knowledge is needed in the development of the Source Water Protection Plan.



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

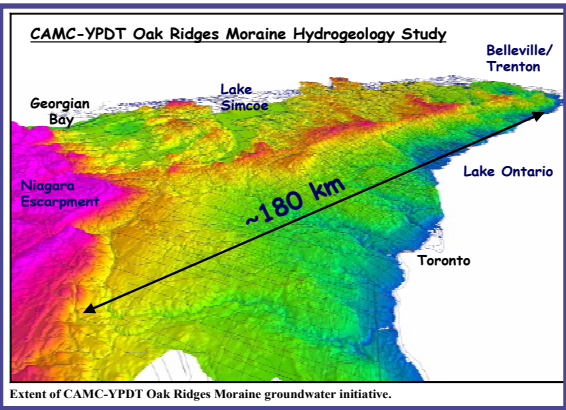
The York- Peel- Durham-Toronto (YPDT) Groundwater Initiative was established in an effort to advance the understanding and management of the existing groundwater system across a large part of south central Ontario and ensure consistency in research and planning endeavours. Members of the YPDT Coalition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



In 2006, the partnership’s ongoing efforts included an extensive updating of the YPDT database. Field work included the exploration of the Queensville and Port Perry areas utilizing surface geophysical techniques. The hydrogeologic interpretation (where water is) and numerical groundwater flow model (how water flows) was extended west and east through Peel and Durham Regions. A comprehensive report on the numerical groundwater modelling efforts was prepared and is available at the program web site www.ypdt-camc.ca. A peer review of the numerical model was also initiated.

This initiative supports the work related to several programs including:

- The Oak Ridges Moraine Conservation Plan;
- The Province of Ontario’s Source Water Protection (Clean Water Act) program;
- Municipal infrastructure and water supply activities; and
- Conservation Authority initiatives such as Watershed Planning.



Generic Regulation 42/06

In February 2006, Central Lake Ontario Conservation Authority (CLOCA) became the first Conservation Authority in Ontario to implement a new regulation in compliance with the provincial Generic Regulation. CLOCA Regulation 42/06, Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses provides added responsibility to regulate development activities within and near the Lake Ontario shoreline and all wetlands in addition to the traditional regulation of hazard prone areas of waterways and valley systems.



Midland Painted Turtle catching some sun rays in a local wetland.

The regulated areas are fully mapped for the CLOCA watershed, allowing residents and municipal partners to readily identify areas where CLOCA has an interest in reviewing applications. The new regulation area is somewhat less than the past regulated area, and is much more focused on the actual hazard land areas.

With the passing of Ontario Regulation 42/06, the involvement of CLOCA’s Natural Heritage staff has expanded in order to participate effectively in the review of permit applications. Natural Heritage staff have had the opportunity to meet with many landowners over the course of 2006 and discuss suitable options to protect wetlands on their properties. As a result of this one on one interaction, we have had favourable response overall from landowners and view the process as a worthwhile step toward improving our education and stewardship services.



Sample of regulation mapping.

Planning and Regulations

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

Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation administered by the Authority, ensure residents are protected and the integrity of the watershed floodplains are maintained. By directing development away from flood and erosion prone areas, we reduce the risk to life and property which result from flooding and erosion.



- Statistics for 2006:
- 205 new planning files were created (a total of 567 pieces of correspondence)
 - 171 written requests for information regarding properties within the watershed
 - 246 occurrences under the O. Reg. 42/06, Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses

Did you know?
Conservation Authorities, the Ontario Ministry of Natural Resources and Environment Canada are responsible for forecasting where and when flooding is likely to occur and issues flood alerts and warnings to municipalities and the general public.

Caring For The Moraine Project

More landowners are now helping to protect the Oak Ridges Moraine, as a result of a major landowner contact program launched earlier this year in selected areas of the Oak Ridges Moraine, part of Ontario's Greenbelt.

Called the 'Caring for the Moraine Project' (CMP), it was created by 23 conservation and environmental organizations working together to provide coordinated conservation services, made possible with a grant of \$230,000 from the Oak Ridges Moraine Foundation and contributions from the project organizations totaling \$460,000.

The CMP is strictly a voluntary program. It's designed to be a user friendly, one-stop starting point for people who own land on the Oak Ridges Moraine and are seeking advice on land management and restoration, protecting their drinking water or improving their property value while protecting its natural features.

To date the CMP has been well received resulting in the following accomplishments:

- Provided 11 presentations to local groups and partner organizations.
- contacted 63,658 landowners through newspapers and flyers
- contacted 4,072 landowners through direct mail
- conducted 8 landowner workshops
- contacted nearly 20% of the Moraine residents
- Visited 79 Moraine properties
- planted 2,500 native prairie plants
- planted 170,500 native trees over 213 acres
- restored 2.4 kilometres of stream habitat
- created 7.5 acres of wetland
- protected 143 'new' acres of wetland through 10-year agreements
- restored 15 acres of prairie habitat
- completed 14 well decommissioning and wellhead protection projects



The CMP will continue into 2007, in newly expanded project areas, with \$600,000 of new funding from the Oak Ridges Moraine Foundation and over \$1 million in funding contributions from the partner organizations.

Participating in the CMP Central Lake Ontario Conservation Authority (CLOCA) contacted over 100 landowners in the Chalk Lake area located in the Lynde Creek headwaters, conducting site visits on numerous properties, assisting with the delivery of two stewardship related workshops, and completed projects that planted close to 40,000 native trees and shrubs. The coming year will focus on the private landowners surrounding the Enniskillen C.A. Staff are undertaking landowner contact and developing projects as part of the year two commitments to the CMP project.



CLOCA planted over 40,000 trees on the Oak Ridges Moraine in 2006.

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. This stewardship program continues to expand, with more programs, services and increased funding opportunities available to a wide range of landowners.

The Authority's tree seedling sales program continues to be popular with over 18,000 seedlings sold and distributed in 2006, an increase of 30% over sales in 2005. Bulk ordering of trees enables CLOCA to sell trees to watershed residents at lower costs.

The Clean Water Land Stewardship Program (CWLSP) continues to grow as landowners within CLOCA's jurisdiction become more aware of the services provided by the Authority. Numerous projects on private land were undertaken in 2006 with assistance from the CWLSP, including free technical assistance, links to other stewardship programs, financial assistance, project design and coordination. Funded projects included reforestation, stream fencing, cattle crossings, alternate watering systems, farmyard runoff control, well upgrading and well decommissioning. In addition to completed projects, a number of projects are being developed for implementation in 2007.

Partnerships are an important component of the CWLSP. The Authority continued to act as a delivery agent for the Greencover Canada program. Through this program, we are working with local agricultural business operators to carry out stewardship projects identified in their Environmental Farm Plans, assisting with the submission of funding applications, designing and implementing projects according to "Beneficial Management Practices" and providing top-up funding assistance where possible.

Stewardship program staff from the Conservation Authorities of Durham Region (Central Lake Ontario Conservation, Toronto and Region, Lake Simcoe Region, Ganaraska Region, and Kawartha Region), Durham Region Economic Development and Durham Stewardship Council, continue to meet sharing ideas and working towards greater consistency in programs across Durham. These meetings have resulted in improved coordination of efforts, increased coordination of events and activities and more efficient delivery of programs. The ultimate goal for this group, is to ensure that landowners get the services they need and know where to get them.



Creek restoration project on a section of the Bowmanville Creek in Clarington.



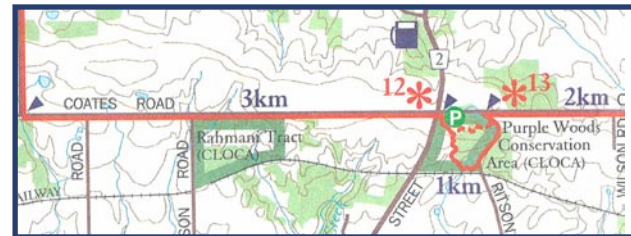
Oak Ridges Trail Association (ORTA)

The partnership between the Oak Ridges Trail Association (ORTA) and Central Lake Ontario Conservation Authority (CLOCA) expanded once again in 2006.

After the initial partnership, and rerouting of the ORTA trail into the Long Sault C.A. in 2004, ORTA opened trail sections through Purple Woods C.A. and the Rahmani Tract this past summer. It is anticipated that the partnership will continue to grow next year, as ORTA is also working with the Authority to finalize plans for a new portion of trail that will use the Crow's Pass C.A. in Scugog Township.



CLOCA Chair Jim Schell (left) and ORTA President Harold Sellers (right) cut the ribbon to open a section of the trail through the Rahmani Tract.



ORTA map showing the Oak Ridges Trail through Purple Woods C.A. Future updates will include the new route through the Rahmani Tract.

Watershed Based Fisheries Management Plans

In May of 2005, Central Lake Ontario Conservation Authority (CLOCA) embarked on a new cooperative project with the Department of Fisheries and Oceans and the Ministry of Natural Resources to prepare Watershed Based Fisheries Management Plans (WBFiMP) for CLOCA's watersheds. The Fisheries Management Plans take into account many aspects of our aquatic resources not considered in the Aquatic Resource Management Plans (ARMPs), including management actions for improving healthy fish communities, fish habitat opportunities and enhanced angling opportunities.

Plans are currently being developed for Oshawa Creek, Lynde Creek, Bowmanville/Soper Creeks and Black/Harmony/Farewell Creeks. The WBFiMP's development process provides a forum where all agencies involved in resource management, including resource stakeholders and the general public, can share their ideas and develop a unified vision for fisheries and fish habitat management. It is through this cooperative effort that meaningful WBFiMP recommendations are developed and can be implemented in a coordinated manner.

A final draft for all WBFiMPs is anticipated for the summer of 2007. Additionally, this partnership has facilitated improvements to our aquatic database initiated in 2005 and will continue in 2007. These improvements will further support our role in plan review, stewardship, and ongoing monitoring of the aquatic resources in the Authority's jurisdiction.

See Us On The Web

Information Is Just A "CLICK" Away.



Central Lake Ontario Conservation Authority works hard to keep the web site fresh and up to date. The web site contains a library section, news items, brochures, reports and more.

Over the past year, there were more than 57,000 visits to the site and over 250,000 pages of information downloaded.

Don't forget to add the web site to your favourites list!

www.cloca.com

Flood Forecasting And Warning System

The Central Lake Ontario Conservation Authority's (CLOCA) Flood Forecasting and Warning system continues to improve the safety of watersheds for people.

In addition to monitoring weather and stream systems and issuing 13 Flood Safety Bulletins in 2006, two new stream gauging stations were installed and one rain gauge station was upgraded with new equipment. These new stations have increased the Authority's monitoring system to 14 stream gauges and 9 rain gauges throughout our watershed. These improvements are components of a strategy to provide effective information collection and reporting to municipal partners during times of flood emergency.

Floodplain Mapping

Keeping floodplain maps up to date is an important step in protecting people in the watershed from a flood. In 2006 Central Lake Ontario Conservation Authority (CLOCA) conducted in-house development of a Digital Elevation Model (DEM) and Hec-Geo-Ras analysis for floodplain modeling and mapping. This means that Authority staff will have an accurate picture of how wide a creek will be during a flood in an effort to proactively prevent loss of life and reduce damage to property.

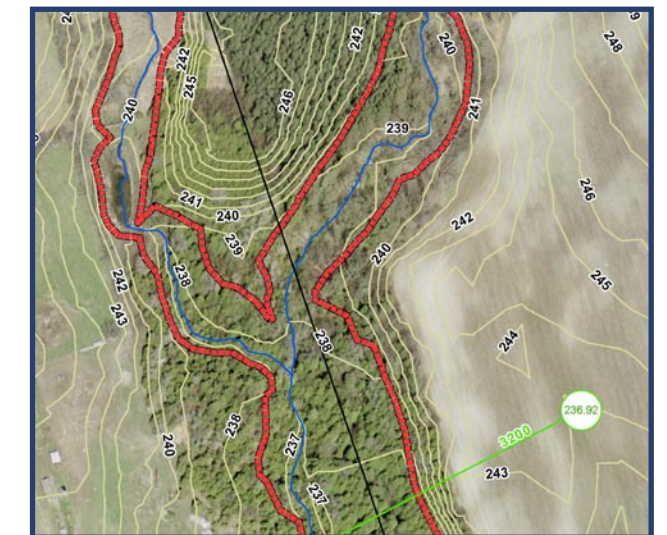
CLOCA staff updated the floodplain mapping for portions of the Oshawa Creek and tested the DEM, floodplain analysis tools and mapping methods. After the successful application of this new technology, CLOCA prepared the Terms of Reference for the Lynde Creek Floodplain Mapping Project and will work with the consultant in 2007 to replace 30 year old floodplain maps with fully functional state of the art digital floodplain mapping. This mapping will also include a series of modelled storm floodlines to predict flooding conditions based on weather forecasts. Relational databases will also be generated, so that existing structures and property within the floodplain can be identified and individuals contacted before a 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.

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.



A stream hut located beside Taunton Road at HWY. 57 in Clarington. Notice the solar panel high above.



The red lines (floodplain) indicate what the creek would look like during a flood.

Did you know?

Impacts from climate change could include:

- More frequent severe weather, such as, thunderstorms, ice storms, tornadoes and floods.
- More drought (heat waves, forest fires)

Volunteers In The Watersheds

Volunteers were very active in the conservation areas in 2006 assisting in the various projects below. Many students volunteered with the Authority to gain credits towards their mandatory community service volunteer hours. Anyone wishing register as a volunteer is asked to please contact Ms. Annette McDonald at the Authority office (905) 479-0411, ext. 144 or visit our web site at www.cloca.com.

2006 Volunteer Activities:

- Individuals volunteered as activity centre hosts at the Durham Children's Groundwater Festival.
- Volunteers assisted in all aspects of the Maple Syrup Festival held annually at Purple Woods C.A.
- Durham Region Field Naturalists helped build a new bridge and assisted with trail upgrades in the fall at Stephen's Gulch C.A.
- Members of the Canadian Auto Workers (CAW) Local 222 assisted with the planting of over 3,000 seedlings at Enniskillen C.A..
- Oak Ridges Trail Association (ORTA) assisted with the installation of trail signage at Purple Woods C.A. and Rahmani Tract.
- Members of the Enniskillen scouting group assisted with the completion of the tree planting demonstration site at Enniskillen C.A. – Rowsell Tract, in the fall.
- 16th Ajax Scouts assisted in the bird box monitoring program at Lynde Shores C.A. – Cranberry West Tract in the fall.
- Working with Authority staff in September, members of the internet float fishing community (floatfishing.net) organized a much needed cleanup of the Oshawa Creek. At the end of the day a massive 20 cubic yard bin was filled to overflowing (see picture below).



What a Catch! Members of the float fishing community stand in front of the items removed from the Oshawa Creek in September. Volunteers extracted 17 shopping carts, tires/rims, kitchen appliances, carpets, bikes and numerous other hazardous products that belong nowhere near a creek.

Thank You!

The 2006 land acquisitions were made possible with support from:

- **Regional Municipality of Durham**
- **Oak Ridges Moraine Foundation**
- **Nature Conservancy of Canada through The Ontario Greenlands Program**
- **Central Lake Ontario Conservation Fund.**

New Property Acquisitions

The **Enniskillen Valley Land Acquisition Project** is a 1,310 acre public greenspace legacy project created in partnership with the landowners who call this area home. This important Environmentally Sensitive Area (ESA), is part of the Oak Ridges Moraine Conservation Plan Natural Linkage and Countryside Areas. The Area provides significant groundwater resources, open meadows, mature forests and wetland features in the steeply sloped headwaters of Clarington's Bowmanville Creek. It is a major migratory corridor for wildlife, a thriving cold water fishery interwoven with a rural community

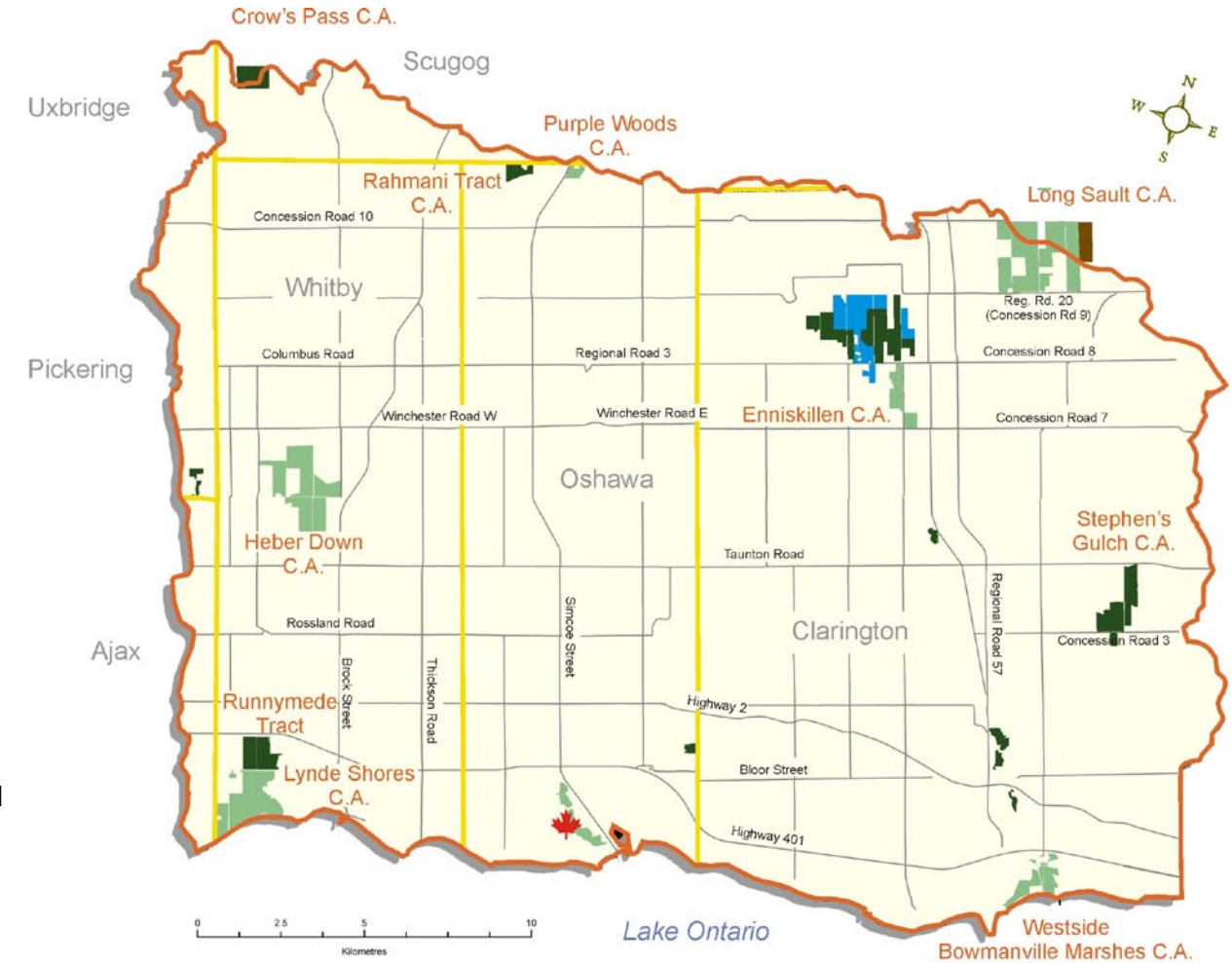
who reside on lands cleared by their forefathers 200 years ago. The Region of Durham, Oak Ridges Moraine Foundation, Nature Conservancy Canada and the Central Lake Ontario Conservation Fund have provided financial support to this initiative.

More than 1,198 acres of land have recently been secured since the project was actively re-initiated in 2004, using fee simple acquisition. This purchase method meets the landowner needs and ensures long term protection, enhancement and public green space for future generations. Future landowner property needs are accommodated to ensure this rural community remains viable. Each property is socially, economically and ecologically linked to the next, requiring a high level of sensitivity as negotiations take place at kitchen tables. 2006 was a particularly active year with the addition of six new parcels of land (494 acres) to the total Enniskillen conservation area landholdings. The tremendous support from long time landowners in this area has meant that significant lands within this valley system will be protected in perpetuity.

The next step is the preparation of a comprehensive management plan to further protect and enhance the cultural and natural heritage of this landscape, continue land and water stewardship efforts, provide education and recreation opportunities that respect and celebrate the unique and unchanged valleylands that make Enniskillen an important legacy in the world of conservation.

Long Sault

Similar to the Enniskillen Valley, the Long Sault area was historically identified as an area for long-term conservation through land acquisition. Land acquisition was also identified in the Long Sault Conservation Area Management Plan (2004) as an important tool in the protection and management of this conservation area. In 2006, Central Lake Ontario Conservation acquired 120 acres of land bordering Long Sault C.A. bringing the total public greenspace in the Long Sault area to 1,096 acres. This acquisition will help to protect portions of the significant Long Sault Forest which contains diverse wildlife habitats and interior forest conditions, a rare habitat within southern Ontario.



- Long Sault 2006 Land Acquisition
- Enniskillen Valley 2006 Land Acquisition
- Conservation Areas (Public Access)
- Conservation Areas (Limited Public Access)
- Central Lake Ontario Conservation Watershed Boundary
- Municipality Border
- Central Lake Ontario Conservation Administrative Office

Why We Monitor Watersheds

Watershed monitoring information plays a vital role in protecting the health of watersheds. The information collected is used in the development of watershed management plans, review of development proposals, identification of restoration and compensation opportunities, tracking and reporting of Species at Risk to the Natural Heritage Information Centre (NHIC), long term trend analyses, stewardship initiatives and the protection of endangered or threatened species. Our monitoring program targets both our land and water resources, reflecting our motto, *"What we do on the land is mirrored in the water."* Much of our data is biotic, meaning we collect information on living things. Collectively, along with the abiotic (non-living data like water temperature) we can measure the response of certain species to habitat improvement, modified land management practices, improved water quality and restoration efforts on a local and watershed scale.

In The Water

During the aquatic field season of 2006, Central Lake Ontario Conservation Authority (CLOCA) staff focused field monitoring efforts on the Bowmanville/Soper Creek watershed. Baseline fisheries data was first collected in this watershed by staff over a two-year period in 1998 and 1999. This season, monitoring included collecting information on water temperature, aquatic bugs (benthos) and fisheries in both creeks and marshes.

Temperature is an important factor with respect to habitat suitability for fish and other aquatic organisms. Approximately 30

portable water temperature data loggers were installed in various locations in May and remained in the creek until late December.

Staff collected aquatic bugs (benthos) from eight stream locations within the Bowmanville/Soper Creek watershed. Aquatic bugs play an important role in monitoring water quality within the watersheds. 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.

Fisheries sampling took place during July at 18 creek locations within the Bowmanville/Soper Creek watershed. As was the case during 1998 and 1999 sampling, coldwater species were captured at most of the sites this year, including brook

(speckled) trout, brown trout, Chinook and coho salmon, rainbow trout and slimy sculpin. These species are typical of a coldwater "trout" stream and are a good indicator of a healthy watershed.

The above collective data is useful in understanding current conditions in our streams. Continued monitoring allows us to track changes in the future. Depending on the species and quantity of benthos and fish found, we can determine whether or not the watershed is experiencing any impacts from stresses such as, pollution, changes in water temperature and surrounding landuse. The information will also indicate how the stream system is responding to good stewardship practices or habitat improvements.



Temperature data logger



Collecting fish species information using an electroshocker.

Monitoring Continued

On The Land

In 2006, Authority staff continued to monitor wildlife in many of our conservation areas. The programs included Blue Bird nestbox cleanouts, bird monitoring and amphibian monitoring.

This year, monitoring efforts, as well as public input, revealed the following species at risk in the Authority's jurisdiction: Butternut Tree, Cerulean Warbler, Hooded Warbler, Horned Lark, Least Bittern, Milksnake, Monarch Butterfly, Peregrine Falcon, Red Crossbill, Red-headed Woodpecker, Red-shoulder Hawk and Yellow-breasted Chat.

Knowing that species at risk are present in the Authority's jurisdiction, enables staff to improve conservation area management practices to ensure that the habitats these areas provide, meet the needs of the wildlife using them.



Monarch Butterflies gather for migration at Bowmanville/Westside Marshes C.A.

Thanks For Your Help

In an effort to expand Central Lake Ontario Conservation Authority's (CLOCA) monitoring program, to involve the community and increase the number of sites monitored, a volunteer bird monitoring program was developed for each conservation area. Starting in 2007, volunteers will be assigned a monitoring route and will be able to report the breeding bird populations for the duration of the breeding season. Beyond this, we would like to expand the monitoring efforts to include frogs, vegetation and salamanders, providing valuable insight into the health of these habitats.

We also received valuable wildlife observations from residents and visitors via the CLOCA website.

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 as bird, fish and amphibian populations and physical features such as water quality and water

levels. The study includes 15 coastal wetlands in this Region, 8 of which are located in CLOCA's jurisdiction. Since 2002, staff, with help from volunteers and our partner Conservation Authorities, have been collecting data on all of these wetlands.



White Water Lily

The fifth season of field work was completed during 2006. This year's data is currently being analyzed and a detailed Technical Report and an updated Fact Booklet will be completed in 2007. The report will describe issues and the potential for restoration at each of the wetlands. For those wetlands that have received rehabilitation efforts, the success of this work will be assessed.

Grand Opening

Bowmanville/Westside Marshes Conservation Area

Opening of the new Westside/Bowmanville Marshes C.A. occurred June 22 with partners Ducks Unlimited, Ontario Ministry of Natural Resources and the Municipality of Clarington. The conservation area now has a 20-car parking facility with pay and display, an information kiosk, a 1.5-kilometre hiking trail loop, two raised viewing mounds and several interpretive signs, funded in part by Ducks Unlimited Canada and The Ministry of Natural Resources, Healthy Wetlands...Healthy Communities Partnership and community partners including St. Mary's Cement.

The project includes a connection with the Waterfront Trail that is currently being improved by the Municipality of Clarington.



Authority Chair, Jim Schell along with guests and dignitaries opened the Bowmanville/ Westside Marshes C.A. on June 22, 2006

Did you know?

Wetlands act as a 'natural filter' of the water by removing toxins and other impurities to improve overall water quality.

Bowmanville /Westside Marshes Conservation Area Management Plan

The Bowmanville/Westside Marshes C.A. Management Plan was completed by the Central Lake Ontario Conservation Authority (CLOCA) in co-operation with the Municipality of Clarington this past year. After an extensive public consultation process (including numerous public workshops, open houses and an open review period), the Bowmanville/Westside Marshes C.A. Management Plan was finalized and approved by both the CLOCA Board and the Municipality of Clarington Council in June 2006. The Management Plan establishes a framework for the management of the Bowmanville/ Westside Marshes C.A. over the next 20 years, with a focus on natural heritage protection and complementary public use.

Ongoing participation from the surrounding Port Darlington community in the management of the Bowmanville/Westside Marshes C.A. is an important component of the long-term Management Plan. This partnership is already evident with the community planting a wildlife corridor, the initiation of a turtle crossing awareness program and a keen interest in the conservation area from surrounding residents. Data generated through the Durham Region Coastal Wetland Monitoring Project will also be extremely important for the long-term management of this significant and sensitive area.



Taking in the wetland and osprey nesting platform at one of the viewing mounds at Bowmanville/ Westside Marshes C.A.

Lynde Shores Conservation Area Management Plan

In 2006, Central Lake Ontario Conservation Authority (CLOCA) focused management activities at the Lynde Shores C.A. in Whitby as a result of our various land and water monitoring activities. We initiated a number of projects including Black Locust removal, some meadow management, ongoing maintenance and monitoring of our blue bird boxes and a road kill survey on Victoria Street.

Black Locust Removal

In the late fall of 2006, two black locust stands (6.5 acres) were removed from around Cranberry Marsh. The black locust plantations, while providing some habitat for wildlife, were comprised almost entirely of a non-native and potentially invasive species.

CLOCA's goal is to re-vegetate these areas with native species that are suitable for these growing conditions. Removing all the trees at once is the least time-consuming and most cost-effective method, allowing us to plant native species sooner, likely within a year.

Meadow Management

The Lynde Shores C.A. Management Plan prescribes maintaining sections of open communities as meadows for the benefit of nesting waterfowl and specialized open habitat bird species such as savannah sparrows and bobolinks. As a result, a schedule of mowing was developed based on the degree of shrub invasion into the fields. In order to determine if the mowing has a positive or negative impact on the bird population, monitoring is done before and after the active management has taken place. A breeding bird survey of the meadow areas at Lynde Shores was initiated in 2006 and will continue following the mowing of a portion of the meadow during winter 2006/2007.



Out with the bad, in with the good. Authority staff remove the invasive tree plantation of that were growing by Cranberry Marsh.

Nest Box Program

Once again, the 16th Ajax Scout troop was eager to undertake monitoring, inspection and maintenance activities on the song bird nest boxes within the Cranberry West Tract with help from conservation staff this fall. The Scout troop built and installed the nest boxes in 2004 and continues to be involved in the program. This year, after an overview presentation during their regular weekly meeting, the 16th Ajax Scouts assisted staff in the field by identifying the species of bird using the nest box, cleaning out old nest material and undertaking any maintenance required to ready the nest boxes for the spring of 2007. The Scouts found that trees swallows, a welcomed species, were the most common species using these nest boxes in 2006.

Roadkill Survey

The Regional Municipality of Durham is currently studying the feasibility of widening Victoria Street adjacent to the Lynde Shores Conservation Area. During the summer and fall of 2006, the Conservation Authority undertook a weekly survey of roadkilled wildlife along the causeway that bisects the marsh. By recording the locations of attempted crossings, the road design, crossing structures and reduced speed limits can be incorporated in the areas of highest "demand". Wildlife passage could be improved significantly by the addition of purposely-built wildlife crossing structures or culverts. During the survey more than 40 wildlife roadkill were recorded. Northern Leopard Frogs, Snapping and Midland Painted Turtles were among the most common casualties.



A snapping turtle shares the road with an automobile. This is a common occurrence in Durham as many roads adjacent to wetland habitats provide nesting sites along their gravel shoulders. Photo courtesy of Ian Maciver.

Learning About The Environment

More than 7,000 elementary students participated in our 11 watershed education programs at local schools and conservation areas. In learning it is said that students retain 10% of what they read, 15% of what they hear, but 85% of what they DO! The power of our outdoor education program specifically means teaching environmental concepts to students through hands-on, curriculum based studies.

Some changes to our education program in 2006 including a new name, to better reflect our message to students and their teachers. The program is now called the "In Your Watershed" program. Staff have been upgrading their skills learning how to use and apply new technology like Global Positioning Systems (GPS) to their programs, so students master new skills. Visits to other outdoor education centres to observe different teaching techniques and see new programs has helped us update program content in anticipation of the Ontario Ministry of Education's revised science and technology curriculum for grades K to 8. The new curriculum has been developed to be more experiential in nature, essentially telling teachers what they need to teach, but leaving the how, to their individual resources. We look forward to being part of Conservation Ontario's efforts to develop new units, which incorporate the principles of watershed management and particularly source water protection.



2006 Regional Envirothon

In April 2006 the Regional Envirothon was hosted at Enniskillen C.A., engaging 60 grade 11/12 students in a variety of activities focusing on Aquatics, Forestry, Soils and Wildlife. Students also presented requirement on the topic of alternative energy sources. The Envirothon program is organized by the Ontario Forestry Association for high schools across Ontario. Working in teams of five, students learn critical thinking and problem solving skills to develop solutions to environmental challenges. This year the winning team was from Peterborough Collegiate Vocational School.

Creek & Waterways Awareness Program

Conservation staff continued to offer the Free Creek & Waterways Awareness Program launched in 2005 to grades 3,4 and 5. To date the program has reached more than 1,000 students in an effort to prevent them from getting caught on 'thin ice'. Through the safety program, students gain an understanding of the dangers associated with playing near waterways and creeks in the winter and spring seasons. Students learn about the risks associated with winter ice, fast moving cold water, flooding and unstable stream banks, when exploring local creeks, waterways, wetlands and ponds. They see first hand the effects of hypothermia on their own bodies, conduct a few experiments and calculate some critical time lines for emergency response teams.



Students are certified and receive a card that demonstrates their knowledge about creek and waterway safety.

Free Summer Family Events

This past summer, Authority staff continued a series of free family events at local conservation areas. More than 500 people of all ages participated in various events, such as, nature hikes, insect and pond studies, a bat night and orienteering sessions. The purpose of these events was to introduce watershed residents to their local conservation areas and promote the importance of our natural heritage and watershed health. Authority staff also participated in hosting two events in partnership with Ontario Power Generation, Darlington Nuclear's 'Tuesday's on the Trail' program, engaging about 225 visitors.

Durham Children's Groundwater Festival



The Durham Children's Groundwater Festival was once again a great success. An annual event, the festival was held during the week of September 25th to 29th at Camp Samac in Oshawa with over 5,100 students participating. Through interactive learning centres, the students discover the importance of water in their lives and carry these messages back to their home and community.

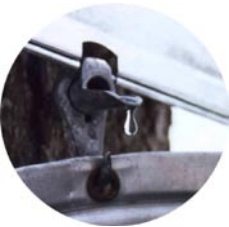
Since 1998 more than 37,000 grade 4 students have participated in the event and 3,500 secondary school students have hosted the activity centres. Each year presents a fundraising challenge, but the festival organizing committee conducted a successful sponsorship campaign and were able to subsidize the student admission by 60%, bussing included. Another festival highlight this year was a workshop on how to start and run a successful water festival held by Children's Water Education Council (CWEC) in partnership with the Ontario Water Association (OWA). The Durham festival was chosen for the second time as the host for the workshop and a learning vehicle for participants.



In 2007 The Festival will mark its milestone 10th anniversary and will be held at Camp Samac from September 24th – 28th. In honour of the anniversary, The Ontario Trillium Foundation has supplied funding to the festival to enhance activity centres, purchase special anniversary items and safety equipment.

31st Anniversary Maple Syrup Festival

The 2006 Maple Syrup Festival at Purple Woods Conservation Area was a great success with over 10,000 visitors attending. The festival was held from March 11th to 18th and the weekends of March (25th, 26th) and April (1st, 2nd). A family tradition, visitors are able to see how syrup was made over 400 years ago to the modern methods of today.



Out In The Watershed

In 2006, Central Lake Ontario Conservation Authority staff were busy in the community promoting the Authority's programs and services at various fairs and fuctions.

The highlight of the year was the Authority's Volunteer Appreciation Night and Environmental Expo held on November 14th at Camp Samac. Everyone enjoyed the guest speaker Chief Topleaf. The community displays were well received and provided plenty of networking opportunities for participants.



Hampton Pond Restoration

Earth works to recreate a pond and wetland system for the Hampton Pond Recovery Project was completed in March of this year. Shortly thereafter, the Hampton Conservation Area was also the site for CLOCA's Earth Day Celebrations on Saturday April 22nd. Wet weather did not deter a large group of enthusiastic residents who planted more than 400 native trees and shrubs.

The project, in partnership with the Municipality of Clarington and the Hampton Citizen's Association, initiated habitat enhancement and naturalization of the historical pond site.

The plantings have been successful in their first growing season, with substantial growth and a high rate of survivorship observed by staff.



Earth Day planting at Hampton pond.

Working Together

While we focus on our own watersheds, staff recognize that our Conservation Authority neighbours to the north, west and east, are facing similar challenges in developing strategies to protect our natural heritage. Working together, we are fortunate to draw on expertise and borrow ideas on a number of initiatives to strengthen our role in protecting and enhancing our watersheds, collectively and as individual conservation authorities.

In March, Natural Heritage staff completed work on the Terrestrial Natural Heritage Model. The Central Lake Ontario Conservation Authority's (CLOCA) model is a slightly modified adaptation of the work that Toronto and Region Conservation Authority had previously undertaken. A final draft of the targeted Natural Heritage System was developed for each CLOCA watershed and is currently being tested internally as a tool for both plan review and watershed planning exercises.

Natural Heritage Discussion Group

Natural Heritage staff from the nine Conservation Authorities that span the Oak Ridges Moraine, continued to meet through 2006 to discuss Natural Heritage issues and initiatives. The group, collectively known as the South Central Ontario Conservation Authorities Natural Heritage Discussion Group (SCOCA), meets quarterly with each of the Conservation Authorities taking a turn with hosting duties. In 2006 the meeting topics included Conservation Authority derived Natural Heritage Systems, Provincial initiatives including Natural Spaces and the Southern Ontario Land Resource Information System (SOLRIS).

The SOLRIS project has been much anticipated since its inception in 2002. The Ministry of Natural Resources (MNR) rolled out the final (phase II) product for several regions in November. CLOCA staff have been reviewing the product in conjunction with our in-house derived Ecological Land Classification (ELC) mapping. The review will wrap up in early 2007, with a feedback report to the Ontario Ministry of Natural Resources.



Aphrodite Butterfly
at Heber Down C.A. in
Whitby.

Invasive Species Management

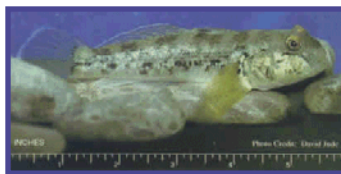
An inventory of invasive species was undertaken as part of a summer work program in 2006. The work was undertaken to determine where and what invasive species occur in the conservation areas and in what population densities they occur. Collecting this information will assist staff in developing management techniques and priorities for each of the areas. Invasive species data was collected at Crow's Pass, Long Sault, Purple Woods, Rahmani, Bowmanville Valley, Westside Marsh, Stephen's Gulch, Oshawa Valley, and Lynde Shores Conservation Areas. The data is currently being studied and will be available on the Authority's web site in the near future.

You Can Help!

Durham area Conservation Authorities and the Durham Stewardship Council have established a working group to develop products that will inform our communities on how to identify, remove and or manage the establishment and spread of invasive plants that threaten local biodiversity of our forests, meadows and wetlands. Invasive plants like garlic mustard and dog strangling vine are two of the most threatening species in Durham Region.

Bad Fish

For the first time since fisheries sampling began for the Durham Region Coastal Wetland Monitoring Project (DRCWMP) in 2002, round goby were captured in Frenchman's Bay Marsh (Pickering) and Port Newcastle Marsh (Clarington) in late summer. Round goby are an invasive fish species and pose a great threat to native aquatic species. Originating in Eastern Europe, in 1990 these fish were first discovered in the Great Lakes system in the St. Clair River and are believed to have been introduced via ballast water from ships. These two marshes are not located within the Authority's jurisdiction, but are in close enough proximity to cause immediate concern. Future monitoring through the DRCWMP will track the local distribution of the round goby and its effect on the aquatic ecosystem.



If you catch this fish please do not put it back in the water. Contact CLOCA at (905) 579-0411.