

Central Lake Ontario Conservation

# Year in Review 2015

*What Happens Here Matters*



Central  
Lake Ontario  
Conservation



# Message from CLOCA's Chair and CAO

2015 was a very exciting time to be leaders in watershed management and we are pleased to recognize and celebrate another successful year. With a focus on engagement, science and conservation, we continued to deliver our core programs and services so critical to healthy watersheds, for today and tomorrow. We also strived to think creatively, foster new ideas and offer improved services and programs to meet the needs of our watershed community.

This **Year in Review** is a summary, highlighting a selection of our main projects and programs which contribute to both immediate and long-term improvements to watershed health.

Our work, shared successes and accomplishments would not be possible without the dedication of our staff, Board of Directors, and partner municipalities. With key funding from the Region of Durham, we are able to leverage additional resources to undertake important programs and projects across our jurisdiction. We would like to thank our partners, volunteers, community organizations and businesses, who see value in the services we offer, so they too can look after watershed health.



Chris Darling  
Chief Administrative Officer



Don Mitchell  
Chair, Central Lake Ontario Conservation



Enniskillen Conservation Area

## 2015 Board of Directors:

### Town of Ajax:

Councillor Shaun Collier

### Municipality of Clarington:

Mayor Adrian Foster

Councillor Ron Hooper

Councillor Joe Neal

### City of Oshawa:

Councillor John Aker

Councillor Bob Chapman (Vice Chair)

Councillor John Neal

Councillor Nester Pidwerbecki

### City of Pickering:

Councillor David Pickles

### Township of Scugog:

Mayor Tom Rowett

### Township of Uxbridge:

Mayor Gerri Lynn O'Connor

### Town of Whitby:

Councillor Lorne Coe

Councillor Joe Drumm

Mayor Don Mitchell (Chair)

Councillor Elizabeth Roy

Working in  
Partnership



Member of





# Communicate, Educate, Inspire

*To share our watershed story, to inspire our community to be watershed champions and to take action for real change.*

Each year Central Lake Ontario Conservation engages the community in hands-on activities throughout the seasons to celebrate all aspects of our natural environment. Our program *Wild About Our Watershed* creates awareness and offers participants tools to contribute to watershed health. In 2015, we engaged 250 people at six events at our signature site for 2015, the Purple Woods Conservation Area. A Valentine's snowshoe, invasive species management workshop, a firefly night hike and a pop-up dinner by local chefs, were just some of the exciting events we delivered.

## **PURPLE WOODS MAPLE SYRUP FESTIVAL**

Once again, we hosted over 10,000 visitors of all ages at the 40th annual Purple Woods Maple Syrup Festival during the month of March. Thanks to our visitors, sponsors, volunteers, community groups and staff who make this large-scale event possible.

## **IN YOUR WATERSHED**

Education staff continued to deliver exceptional curriculum based programs to more than 7,200 students in 2015 from grades 1 – 12 from the 4 school boards we service across our watershed. New this year

was the Stream of Dreams™ an environmental art program designed to raise awareness of local water resources and fish habitat. A new learning circle was installed at Enniskillen Education Centre to facilitate the demand for our programs.

In the summer, we offered programs at the Enniskillen Conservation Area in partnership with Natureways Day Camp, Ontario Power Generation Darlington's Tuesdays on the Trail and other municipal camps from around our watershed. We connected with about 200 families who experienced Aboriginal and early settler history, safe hiking, invasive species, native species and everything in between.

## **DURHAM CHILDREN'S GROUNDWATER FESTIVAL**

The regular Durham Children's Groundwater Festival was canceled in 2015 due to teacher labour disruptions. In its place an outdoor science fair was offered as a "free we come to you" program from October to December, delivered by our education staff, parent and partner volunteers. We saw about 2,000 students at 26 schools, about half of what we normally see at the Festival.



**In Your Watershed Snowshoe Program**



**Purple Woods Maple Syrup Festival Volunteers**



# Leaders in Integrated Watershed Management

*To improve watershed health and in turn, our quality of life.*

## WATERSHED AND HABITAT RESTORATION

In 2015 we completed the following: the *Montgomery Creek Restoration Plan* which identified a number of actions to improve water quality and natural heritage features in this urban system; the *Wildlife Corridor Protection and Enhancement Plan* to assist our regional and municipal partners with road implementation projects to enhance wildlife connectivity; the *Oak Ridges Moraine Report Card* which highlights and grades overall health of specific biological indicators in our watershed headwater areas.

With our monitoring and data collection well in hand for the 18 coastal wetlands we monitor across Durham Region, we are beginning to conduct analysis and assessments to move toward implementing management and restoration plans. We constructed fish habitat features at McLaughlin Bay and initiated fish habitat improvements and a project to manage water levels in Bowmanville Marsh.

## OUR EXPERTISE

We contributed to some key high-level Provincial documents and plans including *Wetland Conservation in Ontario: A Discussion Paper*, *Conservation Authorities Act Review*, *The Great Lakes Protection Act*, *Provincial Plan Review – Greenbelt*, *Oak Ridges Moraine Conservation Plan*, *Growth Plan for the Greater Golden Horseshoe*, the *Aggregate Resources Act Policy Framework* and secured a commenter role on the *TransCanada Pipeline Project*.

We continue to have input into the 407 project. We monitored water quality, specifically turbidity along the 407 alignment, resulting in future improvements to sediment controls and water quality. In 2015,

we challenged a decision to reduce the length of a proposed bridge to span the *Provincially Significant Harmony Farewell Iroquois Beach Wetland Complex* on the future Hwy 418. A decision to revise the span length and location has been agreed to by CLOCA and the proponent designing and building the highway. Approval from the Province is pending.

CLOCA continues to participate on the Region of Durham's Roundtable on Climate Change playing an active role on the *Flooding and Natural Heritage Expert Task Force* to help identify and develop programs for the Community Climate Adaptation Plan.

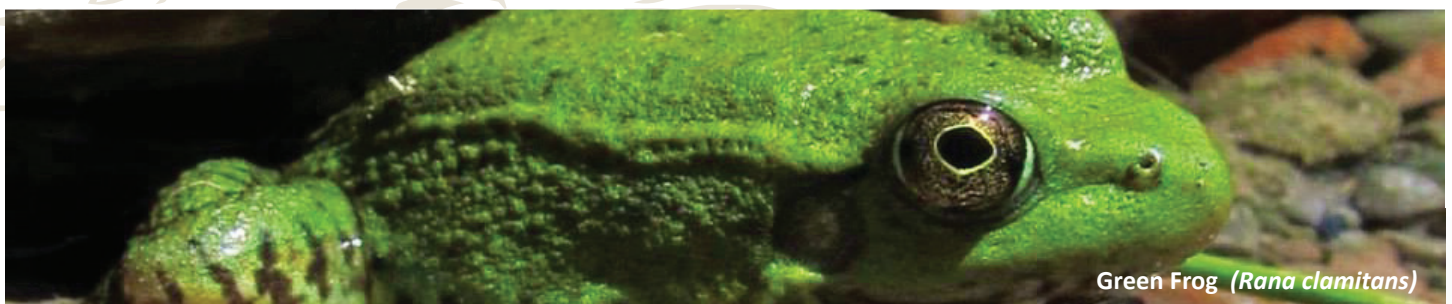
## LAND ACQUISITION

We completed the Lake Iroquois Beach Securement Strategy, focusing on the significant concentration of ecologically important natural heritage features and functions found between Courtice and Bowmanville. This strategy offers a foundation from which future programs and partnerships can be developed to support protection of the Lake Iroquois Beach.

Work was initiated to facilitate an exchange of land between CLOCA and Mr. Schillings, a local landowner, to secure an additional 38 acres of environmentally significant land to add to the Enfield Conservation Area located in the Oshawa Creek watershed.

## PLANNING AND REGULATIONS

Planning staff continued to play a key role in helping our municipal partners in Whitby, Oshawa and Clarington to adopt comprehensive environmental planning updates to their Official Plans. We provided environmental planning advice on over 181 Planning Services files and attended 100 pre-application



Green Frog (*Rana clamitans*)



consultation meetings with landowners, developers and municipal planning department staff. As well we issued 265 permits under the Ontario Regulation 42/06 of various scales and saw convictions on 2 outstanding violations of the regulation.

### CONSERVATION AREAS AND LAND HOLDINGS

Improvements to the Heber Down Conservation Area through a new entrance and parking feature off Cochrane Road were implemented in 2015. The completion of a road/trail access to connect to Devil's Den Pond was also completed.

The completion and official opening of the Waterfront Trail and pedestrian bridge at Lynde Shores Conservation Area was hosted in September. Increased visitors associated with this multi-use trail have inspired staff to develop a comprehensive masterplan to relocate parking and the primary entrance to a more suitable location on Halls Road.

With the acquisition of the Carruthers Tract in 2014, trail realignment, enhancements and decommissioning was completed at the Enniskillen Conservation Area providing users and education program participants with more suitable terrain for hiking and exploring.

A tree marking and harvesting project was initiated at the Long Sault Conservation Area to accommodate thinning activities to develop our maturing plantations into mixed coniferous and deciduous forests.

The Emerald Ash Borer continues to be the primary focus in our hazard tree management program in Conservation areas, particularly within falling distance of public use areas and trails. Trees have been marked, monitored and over 500 ash trees removed by our hazard tree management staff.

## Collaborate & Partner

*To promote a stronger culture of collaboration and partnership across the watershed.*

Thank you to our Watershed Community Heroes for helping us deliver a variety of programs and projects in our conservation areas and the community.

**Environmental Restoration  
Heber Down Conservation Area**  
Deloitte Impact Day,  
The Ontario Aggregate  
Rehabilitation Corporation

**Durham Children's  
Groundwater Festival**  
RBC Blue Water Fund,  
TransCanada, Cargill,  
Municipality of Clarington,  
Durham District School Board  
Teachers Association, Ontario  
Power Generation Darlington

**Increasing Watershed  
Forest Cover**  
RBC, TD Tree Days,  
Canadian National Railway,  
Tree Canada, Forests Ontario

**Outdoor Learning Circle  
Enniskillen Conservation Area**  
TD Friends of the Environment,  
St Marys Cement

**Oshawa Creek  
Water Quality Monitoring**  
City of Oshawa,  
University of Ontario Institute  
of Technology

**McLaughlin Bay  
Restoration Project**  
Environment Canada,  
Darlington Provincial Park,  
General Motors of Canada,  
Ontario Federation of Anglers &  
Hunters

**Bowmanville Marshes  
Restoration Project**  
Recreational Fisheries Conservation  
Partnership Program,  
St Marys Cement,  
Ducks Unlimited Canada,  
National Wetlands Fund,  
Municipality of Clarington

**Waterfront Trail  
Lynde Shores Conservation Area**  
Region of Durham,  
Towns of Whitby and Ajax,  
The Ministry of Tourism and Culture,  
Waterfront Regeneration Trust,  
Ontario Trails Council,  
Shell Foundation



# Advance Watershed Science and Knowledge

*To be the respected and trusted source of environmental knowledge and relevant scientific information for the watershed.*

## SOURCE WATER PROTECTION PLAN APPROVAL

On July 28, 2015, the Ministry of Environment and Climate Change approved the CTC (Credit Valley – Toronto and Region - Central Lake Ontario) Source Water Protection Plan. The approval of the CTC Source Protection Plan is an important step in protecting existing and future municipal water sources. The Source Protection Plan includes a suite of policies based on science with a goal of safeguarding our sources of municipal drinking water. CLOCA will continue to support source water protection through assisting implementation bodies and continuing development of watershed-based science and data management.

## MONITORING

CLOCA continues to advance our scientific understanding of the watershed through monitoring aquatic and terrestrial ecosystems, wildlife, coastal wetlands, creek surface water and groundwater.

Using a variety of equipment, the aquatic monitoring team collected fish data at 64 creek locations, 10 Lake Ontario shoreline locations and 23 coastal wetlands; placed 75 temperature loggers in various creeks to record stream temperatures and collected benthic invertebrate samples at 23 locations across our jurisdiction.

The terrestrial monitoring team focused on collecting ecological data from the small watersheds and permanent plots in the Pringle Creek watershed; mapped and managed invasive species at high priority sites within our conservation areas; and coordinated a Municipal Invasive Species Management Strategy workshop for 17 municipalities across Durham Region and Northumberland County. This undertaking was a partnership between Ontario Invasive Plant Council, Ganaraska and Kawartha Conservation Authorities and the Municipality of Clarington.

The wildlife monitoring team continues to monitor birds and amphibians throughout our watershed. The data collected helps in assessing watershed health and habitat quality. This information is shared with federal and provincial agencies to include in their databases.



The Chickadee Trail at Lynde Shores Conservation Area

For 14 years we have been responsible for the Durham Coastal Wetland Monitoring Program. Data is collected for birds, amphibians, fish, aquatic macroinvertebrates and submerged aquatic plant communities. Water levels and quality are also monitored in each of the 18 wetlands. Additional monitoring includes visual surveys of turtles, winter muskrat houses and vegetation transects in several of the marshes.

CLOCA's Water Monitoring Network is a collection of stream gauges, rain gauges, air and water temperature probes, groundwater monitoring wells, snow measurement sites, surface water and groundwater quality sampling sites. The data is catalogued and analyzed to develop effective watershed wide management programs in support of our policies like the *Flood Forecasting and Warning System*, *Low Water Response* and *Source Water Protection Plan*.





Average snow conditions and no runoff from the snow melt, caused early spring dry conditions and lower baseflows in 2015. In June we received 200% of monthly rainfall averages which recharged aquifers and creek baseflows. Through Ministry of Natural Resources and Forestry funding, summer students collected baseflow data for watercourse and road crossings throughout the watershed, providing a record since 2001. This data is used to support the *Low Water Response*, water taking applications and bypass or pumping requirements for infrastructure creek crossings.

Groundwater monitoring involves the collection of water quality and quantity data through CLOCA's Provincial Groundwater Monitoring Network (PGMN). This program supports our objective for a "no impact to groundwater resources" by proposed development and provides the science behind our *Source Water Protection Plan* and watershed plans. Staff provided technical services to the Conservation Authorities Moraine Coalition and the Conservation Authorities Geosciences Group.

#### LYNDE CREEK MONITORING PROGRAM

CLOCA initiated a 3 to 5 year monitoring program with special funding from the Region of Durham, following a manure spill in Lynde Creek in 2014. This program is designed to assess recovery rates, resiliency and effectiveness of restoration activities and overall health of the Lynde Creek watershed. As the endangered Redside Dace resides in Lynde Creek, the Ministry of Natural Resources and Forestry's Aquatic Endangered Species Lab is also monitoring an additional 20 sites, with CLOCA's support. CLOCA is working with the University of Toronto to monitor species at risk fish using underwater video as a complementary monitoring tool for this program.

#### FLOOD FORECAST AND WARNING

In total 8 Flood Warning messages were issued in 2015; 5 Watershed Conditions Statements for Water Safety; 2 Watershed Conditions Statements for "Flood Outlook" and 1 Flood Watch. In 2015, the monitoring

equipment required for this program was enhanced with an automated system, new products to display real-time creek and rainfall data and web based products to make data more easily available to CLOCA staff and regional and municipal partners.

#### NATURAL HAZARDS MANAGEMENT – FLOODPLAIN MAPPING

CLOCA staff, using state of the art Light Detection and Ranging (LiDAR) remote sensing technology, completed the Pringle Creek floodplain mapping in cooperation with the *Town of Whitby Pringle Creek Master Drainage Plan Update study*. CLOCA staff contributed to two Greater Toronto Conservation Authority committee products, *A Technical Guideline for Flood Hazard Mapping* and the *Guidelines for Management of Regulatory Storm Flood Flow Increases Resulting from Urban Development*. These documents will assist staff with their management responsibilities and engage the province in further discussions around floodplain mapping and urban flooding issues.



Autumn's End

# Operate Responsibly

*To be known as an exceptionally well-run and well-managed, financially sustainable, transparent organization.*

We completed a Capital Asset Management Plan to guide the purchase, use, maintenance and disposal of the assets CLOCA needs in order to conduct business. The plan identifies what we have, its condition and the anticipated needs to maintain our infrastructure as we move forward.

CLOCA reviewed and updated its Personnel Policy to add clarity and comply with current provincial legislation.

*The Planning and Regulations Fee Schedule* was reviewed and updated following a targeted consultation effort and analysis of previous fee revenues. The revised schedules now align our services with the scale and complexity of work, incorporate inflationary increases and support 2016 budget requirements.

## WEB AND DATABASE PRODUCTS

A Generic Regulation Limit Web Mapping Application was released for staff, businesses and the general public to search and print generic regulation limits. Staff can access this data and mapping tool from their desktop or mobile device, allowing for informed and accurate decisions in real time.

An *Oak Ridges Moraine Groundwater Program Website and Data Portal* was launched providing our York, Peel, Toronto and Durham Region partners with

access to the groundwater database and services to search the report library, conduct interactive mapping exercises, and query and graph monitoring data. Database improvements were made providing reliable and efficient acquisition of *Hydrologic Data Information* on more frequent intervals and with additional functions for visual data editing. This database was presented to Conservation Authority staff across the province at the annual 2015 Latonnell Conference.

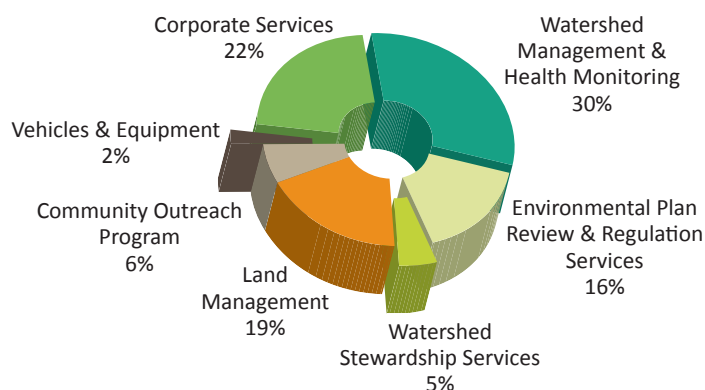
*CLOCA's Content Management System* was upgraded to the Microsoft SharePoint 2013 platform for Plan Review, Regulations, report storage and tracking formal correspondence and agreements to facilitate efficiencies and enhance reporting and searching services.

## STRATEGIC PLAN

Following a comprehensive consultation process with community members, stakeholders, staff and the CLOCA Board of Directors, a CLOCA **Strategic Plan** was completed in 2015. The Plan identifies 5 strategic goals and 48 strategic directions to focus activity on critical strategic issues and priorities; align all parts of the organization around common goals; ensure increased efficiency and effective use of Authority resources; and create transparency and communication of those goals and directions to the Authority's partners.

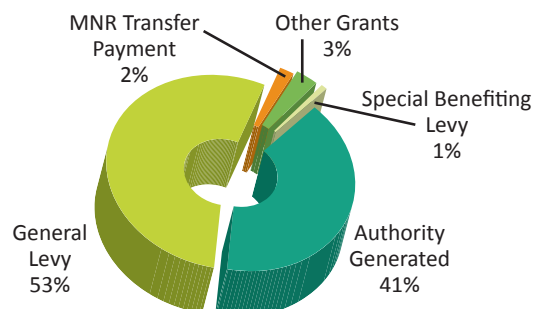
## EXPENDITURES

Total Expenditures: \$6,316,960



## REVENUE

Total Revenue: \$6,640,645







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