



2021 Annual Report

Healthy Watersheds for Today and Tomorrow

2021 Annual Report PRINT PDF Version

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Message from the Chair and CAO

The year 2021 will be another one for the record books, as communities like ours, around the world, continued to be challenged by the COVID-19 pandemic. As an organization, Central Lake Ontario Conservation Authority (CLOCA) was able to deliver our core business programs and services, sometimes from the front lines, but more often from our remote locations, which are a model of efficiency and seamlessness with our virtual technology infrastructure.

Our Operations and Land Management staff continued in their roles as CLOCA's front-line workers, not only providing our Conservation Area visitors with exceptional experiences, but making significant improvements to our public-use infrastructure, as well as facilitating a number of restoration efforts. Those efforts included new pedestrian bridges, trail improvements, parking lots, signage, aquatic and terrestrial habitat enhancements—all of which are highlighted in this Annual Report.

Advanced technology continues to be our friend, not just in providing an efficient framework to work remotely, but supporting our data collection with artificial and human intelligence combined. From additional weather stations installed around our watershed, to assist in our flood management role, to a camera that captures fish movement during spawning, counting and identifying them by species, we are settling into this hybrid model to improve accuracy and knowledge, to ensure excellence in the delivery of our watershed management responsibilities.

While some of our services and programs were scaled back, with limited



summer staff and volunteers, we were still able to accomplish much with the few extra hands that lightened our work load. Internal staff re-assignments helped immensely to fill gaps, allowing us to continue moving the bar forward. Volunteers through the Conservation Area Trails Stewardship (CATS) program spent significant time on our trails toward the end of 2021, making a noticeable difference to litter accumulation that often plagues our public spaces. The saying that 'Many hands makes light work' is truly part of the everyday solution to the challenges we all face. In 2021, we were humbled and grateful once again by the public, our partners, visitors, sponsors, and stakeholders for their continued support in our journey to sustain watershed health.

Bob Chapman, Chairman

Chris Darling, Chief Administrative Officer

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**A true conservationist knows that the world is not given by his fathers
but borrowed from his children.**

JOHN JAMES AUDOBON

An Introduction to Central Lake Ontario Conservation Authority

Central Lake Ontario Conservation Authority receives approximately 50 per cent of our funding from the Region of Durham and generates the balance from fees for services, and financial and in-kind support from the private and public sector. In return, our responsibilities, which have grown and evolved since we were established in 1958, are to manage a 639-square-kilometre jurisdiction with 24 watersheds and 2,700 hectares of environmentally sensitive lands owned and managed by CLOCA. The intent of these efforts is to improve overall watershed health and function, protect biodiversity, along with the provision of access to natural spaces for the mental and physical health benefits this provides to our watershed community. If we were to put a dollar value to the ecological services provided by our watershed, we estimate that value to be \$130 million dollars annually, to support our local economy.

So, welcome to a window into our world with this Annual Report, intended to provide you with a summary of accomplishments specific to the goals established in the [Central Lake Ontario Conservation Authority Strategic Plan 2021-2025](#)



**Conserve, restore and
enhance natural resources
through integrated watershed
management**

Planning and Regulation

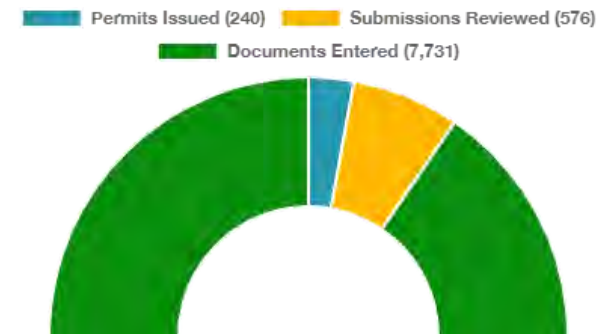
Our Planning and Regulation responsibilities focus on protecting people and property from natural hazards of flooding and erosion. We direct new development away from natural hazards and protect wetlands, watercourses, woodlands, fish habitat, and other key natural features.

In 2021, we provided environmental planning advice on numerous remote pre-application consultation meetings with landowners, developers, and municipal planning department staff. As well, we issued over **240** permits for various development activities, under *Ontario Regulation 42/06*. Over **576** different technical submissions from municipalities, consultants and landowners were reviewed, and we entered over **7,731** documents into our electronic records management

system for efficient retrieval and archiving. Additionally, over **160** virtual pre-application consultation meetings were held with development proponents to help them understand requirements and submit future applications. We also managed multiple violations of the Regulation through enforcement and compliance activity, to maintain the integrity of the development regulation, and address unsafe and unauthorized development activities. In addition, we provided technical data, advice and detailed design review and approvals for many municipal infrastructure environmental assessments across the watershed.

Central Lake Ontario Conservation Authority continued to play an important role in the development of municipal policy, zoning, studies, provincial legislation, and building documents which focus on natural heritage, wetlands, Conservation Authority product and service delivery, agriculture landuse and large-scale commercial fill applications

2021



Integrated Watershed Monitoring Program Climate Conditions

Since 2017, we have been collecting data on 16 indicators for forests, wetlands and streams, to understand current conditions that contribute to overall watershed function and health. An example of an indicator for the forest ecosystem is breeding birds, while an indicator for the stream ecosystem is water quality. These indicators, collectively, provide us with the science to better understand overall watershed health. We also have permanent weather stations established throughout the watershed which collect data on rainfall, windspeed and direction, soil moisture, humidity, barometric pressure, and air temperature. This data is important for modelling future flooding events to better respond to climate change and support CLOCA's responsibilities for our watershed Flood Forecast and Warning program.

In 2021, we were able to complete most of our annual field work with the cancellation of our summer student program resulting in some monitoring efforts like our stream and Lake Ontario work, which will show a gap in our data collection for fish spawning, stream invertebrate and electrofishing sampling, and Lake Ontario seine netting.

Each year, staff assess monitoring results according to a new annual theme with 2021 being climate change. By understanding the conditions of our watershed, we can develop well-informed tools that drive active management. Together these watershed programs build resilience in

Oak Ridges Moraine Groundwater Program

Our Oak Ridges Moraine Groundwater Program (ORMGP) continues to improve our understanding of groundwater resources on and around the Oak Ridges Moraine, a regional glacial feature and source of drinking water for over 200,000 people in the Greater Toronto Area.

Across south-central Ontario, a coalition of 13 government agencies, and 20 local consulting companies, are working collaboratively to better understand and manage water resources. With the Oak Ridges Moraine as a central landscape feature, the program's database and interpretations stretch from the Credit and Nottawasaga watersheds in the west, to the Trent River in the east, and reach from the shores of Lake Ontario northwards to beyond Lake Simcoe and the Kawartha Lakes.

With rigorous data management as a core foundation, the program provides a multi-agency collaborative approach to collecting, analyzing and disseminating water resource knowledge as a basis for effective decision making and stewardship of water resources in this part of Ontario. At CLOCA, like other agencies, we look to the program to provide the regional geological and hydrogeological context for our ongoing technical studies and management initiatives.

For more information on the ORMGP, a full report will be accessible on the website in February 2022 at www.oakridgeswater.ca

Central Lake Ontario Conservation Authority

key areas so that our ecological communities are better prepared for large-scale impacts like climate change.

We will continue to update our online [StoryMap](#) page with 2021 data and showcase the overall program in 2022 as we reach the fifth-year milestone for this program.



Stewardship and Restoration

We continued to work with landowners in our watershed to offer our expertise and programs to support private land stewardship, to help landowners implement projects aimed at improving watershed health.

With this program, initiated in 2020, we continued to meet with interested landowners, resulting in nine projects to plant **29,000 trees** on private lands in 2022. In 2021, we planted **25,000 trees** on private land with funding support from Forest Ontario and Trees for Life. In addition to planting services, CLOCA introduced a new *Managed Forest Plan* service category for private landowners and completed two of these plans in 2021. These managed forest plans help landowners meet eligibility requirements for the provincial *Managed Forest Tax Incentive Program*.

We continue these efforts and are creating a new tree-planting program for private landowners across the Region of Durham, supported by the five Conservation Authorities with jurisdiction within the Region. Funding for outreach and communications' costs have been secured from the Region of Durham. Central Lake Ontario Conservation Authority communications' staff are working on behalf of the collaborative to develop a number of communication and marketing products to roll the program out officially in 2022. Funding support for tree-planting project costs are being secured through existing funding partnerships, namely Forest Ontario's 50 Million Tree Program.





**Support healthy communities,
and the protection of people
and property from flooding
and erosion**

Two-Zone Floodplain Mapping and Flood Mitigation Study, Oshawa and Goodman Creeks

Central Lake Ontario Conservation Authority (CLOCA) was commissioned to update the Two-Zone Floodplain Mapping for the area upstream of the Canadian Pacific Railway (CPR) along the Oshawa and Goodman Creeks. This has been a designated Two-Zone Flood Hazard Policy area since 1997. In addition to the update, the study also investigated possible impacts associated with future landuse and climate change. As well, the project identified and analyzed potential flood mitigation solutions for this significant flood hazard area. Funding was provided through the National Disaster Mitigation Program, and Greck and Associates Limited was retained by CLOCA in association with the City of Oshawa to complete the study. The document will be incorporated into CLOCA's Policy and Procedural Document, and updated mapping will be included in the update to the City of Oshawa's *Official Plan* and Zoning By-law.

Recommendations included a new span bridge for the CPR embankments to reduce the number of homes in the floodplain, regional stormwater management in new development areas to reduce flood impacts downstream and further advising Metrolinx, CPR and associated authorities on the importance of flood conveyance. For additional information, please visit our [website](#)

Lake Ontario Shoreline Management Plan

The *Lake Ontario Shoreline Management Plan* was completed by Zuzek Inc, and specifically Peter Zuzek and Seth Logan, coastal engineers. The objective of the *Plan* is to provide current information and mapping of coastal hazards and increase the resilience of coastal communities by providing information and direction for mitigating risk. Within the *Plan*, recommendations focus on avoid, accommodate, protect, and retreat, as the possible conceptual management approaches.

The *Plan* contains information that will assist CLOCA, our municipal partners, and shoreline residents. A complete photo inventory of the shoreline and particularly shoreline hardening was completed using drone photography in the fall of 2018. In addition to the photographs, the *Plan* also provides a breakdown of shoreline structure type and condition.

Additional recommendations include updating the *Plan* every 10 years or as needed, to reflect notable changes in natural hazard policy, Lake Ontario water level regulation, or physical changes to the shoreline. Shoreline erosion monitoring should be completed when new orthophotography provides an opportunity to complete photo interpretation following the methodology used in the *Plan*. For additional information, please visit our [website](#).



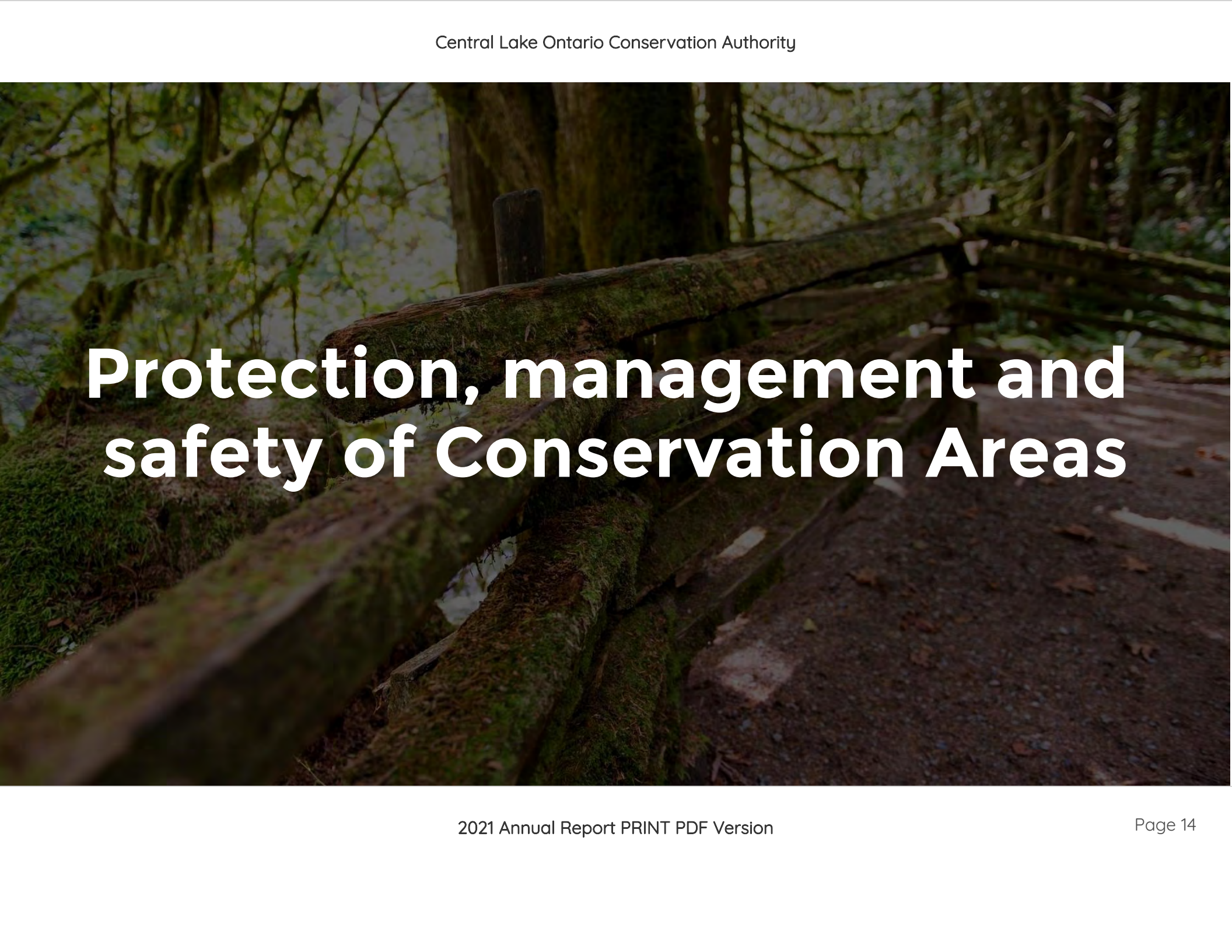
Greenbelt Expansion

In February 2021, the Ministry of Municipal Affairs and Housing initiated a consultation to expand the size of the *Greenbelt Plan Area* for public lands in the Urban River Valleys of CLOCA's watershed, which would include the Lynde, Oshawa, Farewell, Harmony, Soper and Bowmanville Creeks.

The Urban River Valley concept is intended to integrate the Greenbelt into urban areas that were not part of the Greenbelt's initial boundaries by promoting natural and open space lands, and environmental features which assist in ecologically connecting the rest of the Greenbelt Area to Lake Ontario.

Central Lake Ontario Conservation Authority provided comments to [Conservation Ontario](#) and the province to include additional lands for consideration in the Greenbelt expansion. These recommendations included lands associated with Montgomery Creek, Second Marsh, McLaughlin Bay, Darlington Provincial Park, Bowmanville and Westside Marshes. As well, CLOCA's Natural Heritage System and Wildlife Habitat Network, Potential Urban Greenbelt Connections and Urban Wildlife Corridor Connections were incorporated into a comprehensive map to illustrate the recommended Greenbelt Urban Connections for CLOCA's watershed.

Our goal is to ensure the Greenbelt expansion fills in gaps noted in the current *Greenbelt Plan* to strengthen three important natural features within our jurisdiction: the Oak Ridges Morane, the former Lake Iroquois Beach and the Lake Ontario Shoreline

A photograph of a mossy log in a forest, with the title text overlaid. The log is covered in green moss and is positioned diagonally across the frame. The background shows a dense forest with trees and foliage. The text is in a large, white, sans-serif font.

Protection, management and safety of Conservation Areas

Conservation Areas' Update

Each year, CLOCA Land Management and Field Operations' staff implement ongoing property management and maintenance activities on a daily basis. In the spring and summer seasons, when time and conditions allow, they implement a number of habitat improvement projects, as well as update or replace aging public-use infrastructure like trails, signage, parking areas and other amenities that benefit our visitors' experience. In 2021 with an estimated 125,000 visitors—an increase of 25 percent from previous years—CLOCA staff managed to accomplish several projects to ensure we continue to provide a welcoming public space for humans and wildlife alike.

- Purple Woods Conservation Area maple syrup production continued in 2021 with **1,400 taps and 700 litres produced**.

- Staff removed **650 hazard trees** as a result of staff and public reports, and regularly scheduled Conservation Area inspections. Since 2017, more than **2,850** hazard trees have been removed along our 45-kilometre trail system.

- Creation of a **new look-out** at the Lynde Shores Conservation Area as part of LeVay's Lane Trail.

- **Improvements to fencing** along the Chickadee Trail at Lynde Shores Conservation Area to protect the woodlot understory from trampling and better define the trail.

- **Upgraded the Cedar Trail** at Enniskillen Conservation Area with improved surfacing, grading and culverts to ensure the trail is accessible in all seasons.

- **Updated and replaced interpretive signage** located on the main trail at the Bowmanville Westside Marshes Conservation Area.

- Worked with the Municipality of Clarington on road shoulder maintenance activities along West Beach Road to **protect turtle and monarch butterfly habitat** within the Bowmanville Westside Marshes Conservation Area.

- Improvements were made to the Long Sault Conservation Area **trail system** to enhance links between main trails.

- Initiated a **signage improvement** and corporate branding project for signage in all of our Conservation Areas, to begin implementation in 2022.

- **Installation of new songbird boxes** at Bowmanville Westside Marshes Conservation Area with Bowmanville 4.5 Cubs, to provide improved habitat for returning tree swallows in the spring.

Crow's Pass Conservation Area Roger's Tract Restoration Progress

Crow's Pass Conservation Area (CPCA) is a 650-acre landholding located just north of Chalk Lake in the heart of the Oak Ridges Moraine. The Rogers Tract is a distinct 433-acre parcel within CPAC that was donated to CLOCA in 2014, along with a dedicated financial endowment that specifically generates ongoing funds to support the long-term restoration and maintenance of this parcel of land. Over the course of 2020 and the beginning of 2021, CLOCA was able to complete several restoration projects on the Rogers Tract, supported by data collection and planning since the property was acquired. The projects were identified as part of a detailed management plan for this property, and to further support watershed management planning goals and objectives.

Invasive species monitoring and management further protects native plant communities in high-quality habitat.

Heber Down Conservation Area Redside Dace Compensation Works

Central Lake Ontario Conservation Authority received compensation from the Ministry of Transportation of Ontario for impacts to species-at-risk Redside Dace, a small native fish species, due to the construction of Highway 407. The site chosen for this habitat compensation project was Heber Down Conservation Area.

Several proposed project components evolved into a significant habitat improvement project including the removal of gabion-lined stream bank and restoration, replacement of two aging pedestrian bridges to support stream restoration, the rehabilitation of the Devil's Den Pond and overall enhancement of the stream riparian zone in the tributary of the Lynde Creek, which passes through this Conservation Area.

Lynde Shores Conservation Area Improvements

The Lynde Shores Conservation Area is CLOCA's most popular public area, with an estimated 100,000 visits per year, and ever increasing public use. This 380-hectare property on Lake Ontario, in the Town of Whitby, protects two provincially significant coastal wetlands, Lake Ontario shoreline, forests, and meadows. Residents of Durham Region enjoy healthy outdoor experiences and nature appreciation while walking the nature trails, feeding song birds, or passing through on the Great Lakes Waterfront Trail. Rated for years as Trip Advisor's number one "thing to do" in Whitby, Lynde Shores Conservation Area provides an affordable, healthy, educational, and interesting outing for people of all ages and abilities.

Over the past 12 months, we implemented a number of improvements to public-use infrastructure and habitat as part of compensation efforts for impacts to the Conservation Area related to the widening of Victoria Street by the Region of

areas on the property. Two species were targeted, Dog Strangling Vine and Common Buckthorn, using herbicide within a variety of terrestrial habitats throughout the property.

Stream restoration and culvert upgrades took several on-line ponds offline with a new stream alignment and the replacement of aging culverts with new natural stone culverts, to support fish passage. In addition, improvements were made to spawning, refuge and feeding habitat to support this cold-water ecosystem.

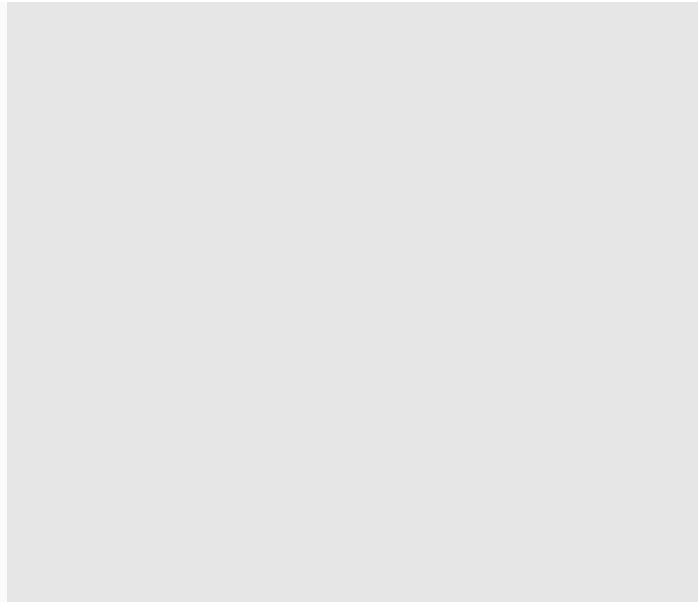
Plantation management of an 85-acre (34 hectares) pine, spruce and larch plantation continues to be managed under the *Forest Management Plan* for this property. A timber harvest was conducted to improve stand quality and health by opening up the canopy, encouraging the establishment of a native hardwood understory which facilitates transition of the plantations to a native deciduous or mixed forest.

Wetland restoration work focused on a 56-acre (23-hectare) habitat composed primarily of Fen and Bog wetland

Durham. These improvements were completed in 2021 and consist of a newly created wetland, a nature trail, pay-and-display parking for 100 visitors, with signage and washrooms, still to come. In the fall of 2021, CLOCA staff and their partners completed a reforestation project to increase forest cover in the Lynde Creek watershed and create habitat for resident and migrating wildlife.

With the generous contributions from CLOCA's tree-planting partners–Natural Resources Canada, Trees for Life (formerly Highway of Heroes), TD Tree Days, Tree Canada and U-Haul Canada–3,500 native trees were planted to create a remarkable, instant mixed conifer and deciduous forest.

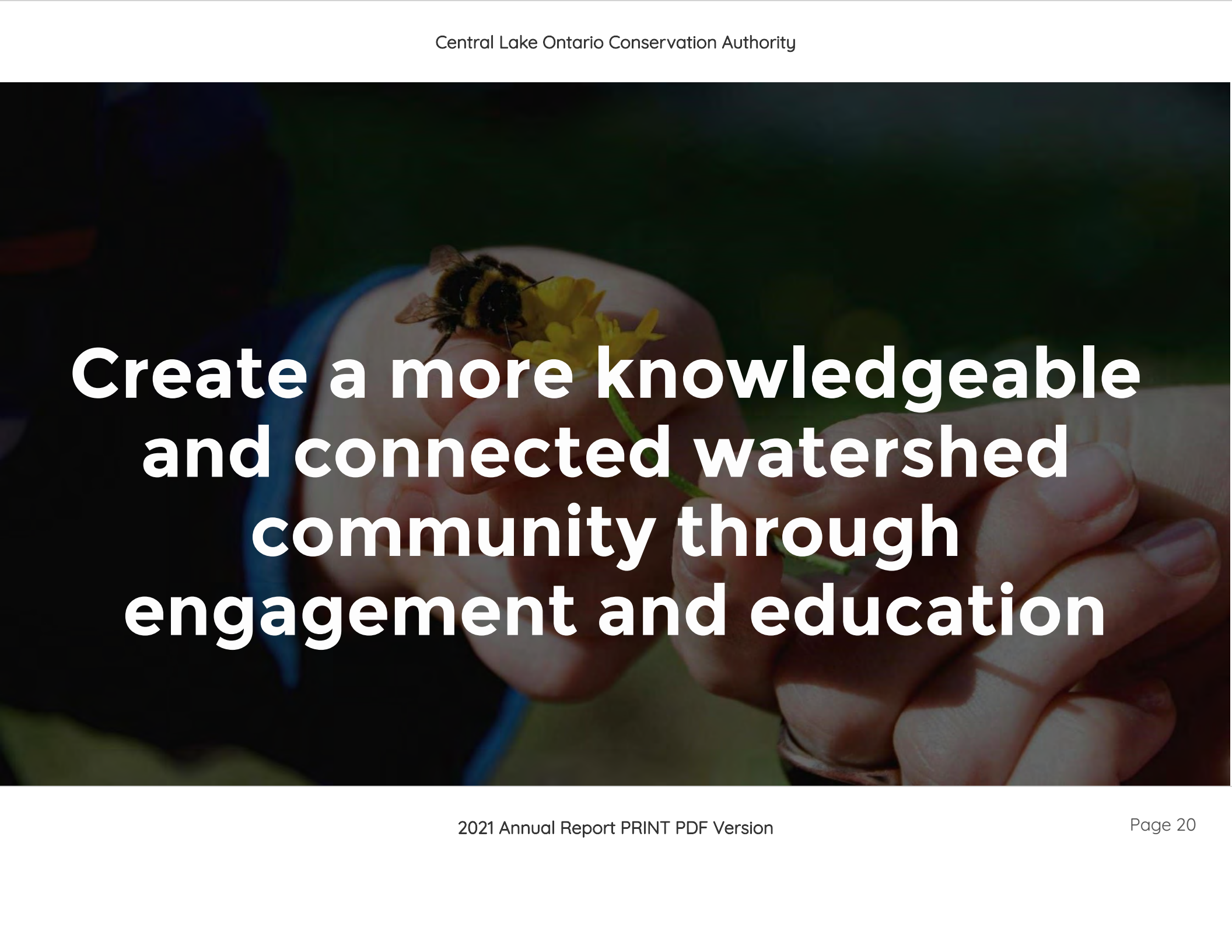
communities. It is estimated that these features are thousands of years in the making and are extremely rare in CLOCA's jurisdiction. A water-level control structure and berm have contributed to unnatural water levels, stressing the current system. A project is underway to restore the natural hydrology. Collectively, these projects will assist us with continued improvement to the ecological services provided by the natural assets on this property and contribute to increasing its resiliency to the anticipated effects of climate change.



Invasive Species Management

We continued to implement our Invasive Species Management Strategy, with the focus placed on carrying out management activities on terrestrial invasive plant species within our Conservation Areas. These management activities included:

- Ongoing garlic mustard removal at Purple Woods Conservation Area.
- Ongoing management of Phragmites at Heber Down Conservation Area has decreased the population significantly and the site continues to be monitored as part of the Phragmites Adaptive Management Framework (a North American-wide initiative to determine the effect of different treatment strategies).
- Dog Strangling Vine and Common Buckthorn continue to be managed at Crow's Pass Conservation Area (Rogers Tract) in a high-quality hardwood forest and within coniferous plantations recently thinned as part of the properties' *Forest Management Plan*. This ongoing work will reduce the further spread of these invasive species and encourage the establishment of native vegetation.
- Management of Autumn Olive within the meadow habitat at Bowmanville Westside Marshes Conservation Area.



**Create a more knowledgeable
and connected watershed
community through
engagement and education**

Virtual Durham Children's Watershed Festival

The 23rd annual [Durham Children's Watershed Festival](#) was delivered virtually in 2021 on five consecutive Friday mornings from September 24 to October 29. The program was offered at no cost to participating teachers and 353 classes of Grades 4 and 5 students, registered.

In-kind contributions of pre-recorded presentations and resources from festival partners such as the Region of Durham Waste Management department, Oshawa Museum, TRACKS Youth Program, Royal Canadian Falconry, Friends of Second Marsh, Ontario Turtle Conservation Centre, and Toronto Zoo Great Lakes Program were included in the pre- and post-lesson materials for teachers. These resources, in addition to the virtual recordings, ensured that teachers had lots of options to accommodate lesson planning for both in-class and at-home learning throughout the school year. Teachers were able to choose to attend

all five or any one of the sessions through our online registration system. The presentations included pre-recorded and live presentations by several partner organizations to facilitate the five themes related to conservation, attitudes, technology, protection, and science around our water resources.

Thanks to our generous sponsors, we were able to generate the revenue to support the costs of developing new Indigenous teachings for the 2021 Festival, covering an appropriate honourarium for special guests, as well as the purchase of 100 [Moccasin Identifier](#) Education Kits. These kits include large stencils of First Nation's moccasins which are, in turn, used by students to paint these images inside and outside their school to further connect to local Indigenous heritage. Along with this visual arts' tool, they also received lesson plans designed in accordance with the Ontario curriculum and modified to reflect CLOCA's watershed context.

In summary, we had 175 classes view the programs when they were live-streamed, and 165 classes view them through our [YouTube channel](#). Teachers have been surveyed and feedback was very positive, but still want a hands-on, face-to-face experience for students.





Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it is the only thing that ever has.

MARGARET MEAD

Conservation Area Trail Stewardship Program

In 2020, due to the COVID pandemic, we cancelled our newly initiated [Conservation Area Trail Stewardship \(CATS\) Program](#). However, interest in the Program continued to grow and more than 129 online applications were received. A decision to relaunch the program in 2021 was further supported by much needed funding from The Great Outdoors Fund and Unsmoke Canada. We received sufficient funds to cover the

creation of 50 volunteer kits and proceeded to connect with CATS registrants. Working with CLOCA's Health and Safety Committee, we updated our training, making it online. It now reflects COVID-19 health and safety requirements and is easily updated for future CATS' intakes. In mid-September 2021, we hosted six face-to-face, two-hour, on-site training sessions at various Conservation Areas, following social-distancing protocols and masking requirements. CATS volunteers received an overview of the program and instructions.

Their primary responsibilities include the following:

- Removing litter.
 - Clearing small debris on trails.
 - Replacing trail signs and markers.
 - Education to inform visitors about wildlife feeding, staying on the trails, parking payment and general best practices.
 - Reporting on tasks and issues observed.
- Participation in specific restoration

activities such as tree-plantings and invasive species management (post-COVID).

An online reporting process allows us to collect valuable data, resolve on-site problems and address larger issues including dogs off leash, pet waste and vandalism. With the funding from Unsmoke Canada, we targeted the removal of cigarette butts from our trails and parking lots, collecting 300 grams in a two-week period. These were then separated and sent to Terracycle to be recycled into plastic pellets for a variety

of other products.

We estimate from September 18 to December 18, 2021, the CATS volunteers have logged **200** hours of time on our trails, submitted **115** reports, interacted with **350** of our visitors and collected **86** bags of garbage —being an estimated **200 kg** of litter! We look forward to more intakes in 2022 and will be hosting four seasonal, face-to-face events that focus on plant communities, wildlife, human impacts and invasive species.



2021 Conservation Ontario Watershed Interpreters' Network Outstanding Achievement Award

Cathy Grant (pictured at left in a 2017 photo), CLOCA's Education Instructor since the early 1990s, was honoured by the Conservation Ontario's Watershed Interpreters' Network at the 2021 Rekindle the Spark conference with their Outstanding Achievement Award for her role in the delivery and development of CLOCA's education programs. This award is presented to an individual member who, during the course of their career, has made significant contributions to Conservation Authority outdoor environmental education programs.

Willow Park Cooperative Tree Canopy Restoration Project

The Willow Park Cooperative is a housing complex in the City of Oshawa with 92 residential units including four fully accessible units. The site is maintained by RCMS and the Willow Park Cooperative Board of Directors who operate within the guidelines for Cooperative Housing as established by the Region of Durham.

The Willow Park community was impacted by the ice storm of 2013; an estimated 45 trees were damaged by the ice conditions which resulted in their subsequent removal. Remaining trees, primarily native ash trees, were further impacted by the invasive species Emerald Ash Borer and have since been removed. It is estimated there have been 90 trees removed due to disease and weather-related damage over the past decade. With funding from TD Tree Days, CLOCA staff partnered with Trees for Life, formerly Highway of Heroes Tribute, and Landscape Ontario to replant 90 native trees in this community in the fall of 2021. Residents and their families will be involved in a public meeting to introduce the trees, create a tree-naming program, and learn how to take care of their trees to create a healthy canopy of shade and habitat for this community and connect to the neighbouring Oshawa Valley Creek.

Watershed Libraries

Since 2018, CLOCA has been working with libraries in our watershed communities to engage the public in a variety of hands-on programs. Through our library partners, we currently offer free parking passes to our Conservation Areas and Back2Nature Hiking Kits in a backpack for borrowing. These backpacks contain a variety of nature reference books and identification guides to help budding naturalists explore the outdoor environment in all seasons.

We installed six StoryWalks™ on trails in our Conservation Areas in partnership with the Clarington Public Library and are finalizing the details for the SMART Watershed Weather Watch Program.

SMART Watersheds

In 2021, RBC Tech for Nature funded years two and three to help us expand the SMART Watersheds Program. We have now established nine community hubs throughout our watershed to engage the community in weather-monitoring activities and hands-on water quality and soil moisture monitoring activities in partnership with local libraries and schools. We now have six weather stations installed to fill the gaps in our data collection.

These weather stations collect significant data every 10 minutes, and the public can access this data through the SMART Watersheds Portal.

A number of communications' products are in development for deployment in 2022, to encourage teachers, students, families and citizen scientists in a number of activities to enhance their understanding of watershed health and inspire them to embrace technology that supports positive change in their communities.

In addition to the weather stations, we will be installing three live network cameras and three water-quality monitoring sondes. The total funding for years two and three is \$100,000, which is in addition to the \$60,000 received for year one.

Bowmanville Fishway Counter

Thanks to the support of our many partners, CLOCA has installed a state-of-the-art Biotactic™ fish counter at the Bowmanville Fishway. This underwater camera system is designed to document the fish species migrating and spawning between Bowmanville and Soper Creeks, and Lake Ontario.

The camera operates 24 hours a day, seven days a week, and uses Artificial Intelligence (AI) to collect an accurate set of data reflecting the fish community species and relative abundance. It is intended to provide a more scientific understanding of changes over time as they relate to

overall fish community health, climate change, the presence of invasive species like sea lamprey, the success of the Lake Ontario Atlantic Salmon Restoration Program and the overall effectiveness of the Bowmanville Fishway, implemented in 2013, in supporting fish passage.

Fishway Counter Project Partners:

Bowmanville Creek
Conservation Group

Boyle Excavating

Biotactic Fish and
Wildlife Research

Central Lake Ontario
Conservation Authority

Elexicon Energy

Municipality of
Clarington

Ontario Ministry of
Natural Resources and
Forestry

Ontario Power
Generation

TD Friends of the
Environment

Valleys 2000



**Demonstrate business
excellence through effective
customer service, engaged
employees and innovation**

Conservation Authorities' Act, Phase 1 Regulations

The Province of Ontario made a series of amendments to the *Conservation Authorities Act* (CAA) in 2017, 2019 and in 2020, resulting in a number of unproclaimed provisions in the CAA. On February 2, 2021, some provisions in the CAA were proclaimed to initiate changes to Conservation Authority governance, consistency in administration, transparency and financial accountability, as well as increased municipal and provincial oversight of Conservation Authority operations.

The regulations were finalized with assistance from the provincially appointed, multi-stakeholder Conservation Authorities' Working Group, which includes Conservation Ontario and a number of Conservation Authorities (CAs), as well as representatives from the municipal, agricultural, and development sectors. Chris Darling, CLOCA's CAO, was part of the Working Group, which met regularly throughout 2021 to identify ways to effectively implement the proposed regulations.

The Province realised Phase 1 regulations, designed to implement these amendments to the CAA, and many of the Working Group's key concerns and challenges identified during the consultations were addressed.

Under the amended CAA, programs and services delivered by Conservation Authorities fall under three categories:

- 1** Mandated by the Province and may be funded by provincial grants, municipal levy and/or Conservation Authority self-generated revenue (e.g., user fees).
- 2** Non-mandatory programs and services that may be provided by a Conservation Authority at the request of and on behalf of participating municipalities through a memorandum of understanding (MOU).
- 3** Non-mandatory programs and services that the Authority determines are advisable to meet the purpose of the CAA in their jurisdiction and require municipal funding through an agreement with the Authority's participating municipalities. Other funding sources such as self-generated revenue (e.g., user fees), project funding from other government agencies or other organizations may also fund (in whole or in part) Conservation Authority-determined non-mandatory programs and services.

The regulations will now give Conservation Authorities until January 1, 2024 to complete the transition to a new budgetary framework with their municipalities. This timeline is sufficient for CLOCA to prepare a transition plan, finalize an inventory of programs and services, and enter into MOUs and/or Agreements with their partner municipalities.

Client Service Standards for Conservation Authority Plan and Permit Review

In 2019, Conservation Ontario (CO) created a document titled *Client Service Standards for Conservation Authority Plan and Permit Review* to ensure Conservation Authorities a set of service standards to meet as a best practice. This document is further supported by the document *Policies and Procedures for Conservation Authority Plan Review and Permitting Activities* issued by the Ministry of Natural Resources and Forestry (MNRF) in 2010. The level of service in the MNRF document was to service and render a decision (i.e., complete the review of a complete application) within 30 days for a minor application or 90 days for a major application.

Under the new CO framework, for applications with complete information, the review and decision should be made within 28 days for major applications, 21 days for minor applications and within 14 days for routine applications. In 2020, staff reported on their Section 28 Applications using the old and the new framework to make a comparison. Under the MNRF Guidelines, 79 per cent of the permits issued by CLOCA in 2020 met the standard with 21 per cent outside the guidance timelines. Using the CO 2019 guidance, 74 per cent of the permits issued met the standard with 26 per cent outside the guidance timelines. In accordance with the Conservation Ontario guidance for 'High-Growth Conservation Authorities', which includes CLOCA, it is intended that this report will also be published on the CLOCA Planning and Regulations' web page, and that results will be reported annually each January.

Amendment of Corporate Administration and Meeting Procedural By-law

In 2020, the Minister of Environment, Conservation and Parks issued a Direction to all Conservation Authorities under the *Conservation Authorities Act* (CAA) enabling us to amend our Administrative By-law, to allow for electronic Board meetings during provincial and municipal emergencies. Central Lake Ontario Conservation Authority's Board of Directors approved amendments to our Administrative and Procedural By-law to allow for virtual meetings during provincial and municipal declared emergencies.

GIS, Information Technology and Data Management

Our technology continues to inspire us to create mapping products, web applications for internal and external use, as well as dashboards for the public to access data and actively participate in programs like SMART Watersheds. Through the Job Creation Partnership, we were able to hire four contract staff to assist in the creation of these products.

An Indigenous mapping tool was created to support the Durham Children's Watershed Festival and their distribution of 100 Moccasin Identifier Kits to Grade 4 and 5 classes across our watershed. The mapping tool illustrates the Scugog Carrying Place, an important cultural heritage trail used by Indigenous peoples in our watershed for thousands of years. The mapping tool will be used by the students to better

understand the Indigenous history in Durham Region and showcase their Moccasin Identifier projects.

In 2021 we resolved a number of security issues for our web mapping and created new themes to support internal workflows, as well as those of the Oak Ridges Moraine Groundwater Program (ORMGP). We also implemented Multifactor Authentication. Our GIS models were updated to the latest version of ArcGIS and we created a new cross-section tool for the ORMGP.

Flood Forecasting and Warning Data, and 20 years of water-quality data for 90 sites were added into the provincially shared Water Information Systems Database and we've updated various web applications to support this initiative.

We continue to provide technical assistance to the Information Management System CACore used by several Conservation Authorities that we service. We initiated a new partnership with Terrebonne in Quebec, to host a base station on our property in exchange for RTK (high-accuracy GPS) subscriptions to support our mapping and modelling programs.

Accounting and Administration

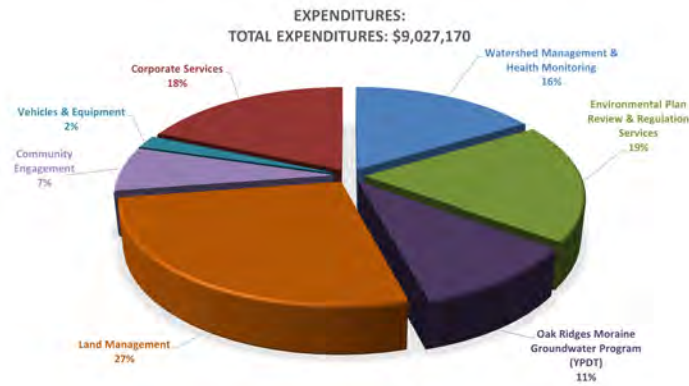
Central Lake Ontario Conservation Authority staff continue to take the initiative to improve processes to support working remotely and efficiently for internal and external accounting and administration services; adaptation to new technologies to facilitate things like telephone communication, mail distribution and revenue collection.

Inventory controls for CLOCA products like our maple syrup were established using software to allow for ease of online purchasing and promotion requests from staff. Efforts to optimize our accounts receivable through our CACore Information Management System has resulted in efficiencies and is now 100 per cent electronic. The goal is now to have all records for accounts payable and receivable electronic with only personnel files maintained in hardcopy formats.

Budget

The approved 2021 budget reflects an allocation of resources to support CLOCA's planned programs and service. This budget allowed us to continue our efforts in support of our mission to advance watershed health through engagement, science and conservation.

Expenditures



Revenue



Board of Directors

Town of Ajax	Municipality of Clarington	City of Oshawa	City of Pickering	Township of Scugog	Township of Uxbridge	Town of Whitby
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