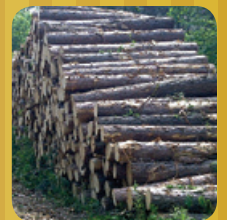


Ganaraska Region Conservation Authority **2013** ANNUAL REPORT





A YEAR IN REVIEW

The year began prosperously as the Gananaska Region Conservation Authority (GRCA) welcomed a new Chair and Vice-Chair to the Full Authority. Thank you to past Officers Ray Benns (Chair) and Mark Lovshin (Vice-Chair).

Authority staff kept busy with many projects throughout 2013; delivering programs such as flood forecasting and warning, groundwater management and forest recreation. Watershed planning, geographical information systems and fisheries management also played an important role. Another initiative to continue with much success is the Clean Water – Healthy Land program which was offered by four participating municipalities.

Also in 2013, the GRCA embarked on a program to update its Strategic Plan. This will be a roadmap that will lead the Conservation Authority from where it is now, to where it would like to be in the future. The GRCA Strategic Plan will be completed and published in 2014.

As the GRCA moves into its 68th year as a dedicated environmental organization, we do so with welcomed anticipation of future accomplishments and successful endeavours.

Chair Forrest Rowden would like to add his thanks to Vice-Chair Wendy Partner, Full Authority Board members and staff for their support throughout 2013.

We encourage you to take a look at another great year in review at the GRCA, and we welcome your feedback.

Forrest Rowden, Chair
Linda Laliberte, CAO/Secretary-Treasurer

SPECIAL THANKS

The Gananaska Region Conservation Authority wishes to thank the many gracious volunteers, partners and organizations who support our programs and services through the year, and generously donated funding and labour to the recreational management of the Gananaska Forest.

Many of the Gananaska Forest Centre programs rely on grants and partnerships to flourish, and the GRCA is thankful for all of them. This year's partners included the TD Canada Friends of the Environment Foundation, which donated funds for a new commercial composter; the W. Garfield Weston Foundation's Environmental Leaders of Tomorrow Program, which funded residential visits to the Centre for at-risk youth; and a new partnership with the Peterborough Victoria Northumberland and Clarington Catholic District School Board, which partially subsidized student visits to the Centre. The annual OFAH/ GFC Conservation Dinner continues to be a successful partnership, helping fund equipment for the outdoor education program.

A special thank you to Veridian Corporation for their assistance in burying the GRCA time capsule; Union Gas Limited for installing the new walkway at Corbett's Dam; Purus North America Inc. for assisting with the walkway at the Gananaska Forest Centre; and to Enbridge Inc. and volunteers from Trinity College School, Cpk Interior Products, 718 Yukon Port Hope RC(Air) CS and 1st Port Hope Scouting who planted trees and shrubs along the Gananaska River.

Thank you to the Ministry of Natural Resources for funding the purchase and installation of safety booms at each of the GRCA's three dams through the Water and Erosion Control Infrastructure Fund.

Thank you to the Canada Summer Jobs Program, which partially funded all of our hard-working and dedicated summer students who are a large hands-on help during our busiest time of year. Thank you to the Great Lakes Community Guardian Fund for providing funds to hire an Assistant Stewardship Technician who ran the Yellow Fish Road Program during the 2013 season.

The GRCA would also like to thank all of the volunteers, schools, businesses, corporations and funders for supporting the Town of Cobourg Water Conservation Garden.



TOWN OF COBOURG WATER CONSERVATION GARDEN

The Town of Cobourg Water Conservation Garden was completed in 2013 with the grand opening celebration held on June 14th. Built in partnership with the GRCA, Lakefront Utility Services Inc., the Town of Cobourg and the community, the garden showcases and demonstrates techniques, products and plant materials that help to conserve water. All aspects of the garden can be easily and aesthetically incorporated into a residential, commercial, or public setting.

DRINKING WATER SOURCE PROTECTION

Since submitting the Ganaraska Source Protection Plan in August 2012, the Trent Conservation Coalition Source Protection Committee has received comments from the Ministry of the Environment and municipalities. All comments are being considered and adjustments to the Plan are occurring where warranted. This Plan establishes policies to mitigate or eliminate significant threats to water quality and identifies who is responsible for implementation. Where possible, the Plan builds on work currently underway and recognizes or reinforces existing management practices relevant to drinking water source protection. Re-submission of the Plan for final approval will occur in March 2014.

Updates have also occurred to the Ganaraska Assessment Report which was approved in 2011. The updates include results from additional computer modeling that was undertaken which identified significant drinking water threats: marina gasoline storage tank ruptures (fuel spill) impacting the Cobourg and Newcastle surface water supplies; and wastewater treatment plant disinfection failures impacting the Cobourg, Newcastle, and Port Hope surface water supplies. Submission of the updated Assessment Report for approval will occur in March 2014.

STEWARDSHIP

Clean Water – Healthy Land Financial Assistance Program

Thirty-five stewardship projects were approved for implementation in 2013. Landowners, residents, community groups, schools, and businesses within the Municipality of Clarington, Municipality of Port Hope, Township of Hamilton and Town of Cobourg are eligible to receive assistance for projects such as water well upgrades and decommissions, tree planting, agricultural best management techniques and rain barrel rebates.

Tree Planting

In 2013, over 12,500 tree seedlings were planted across the region by landowners or contractors through the GRCA Tree Planting Program. Eligible landowners received funding to subsidize the cost of the seedling purchase or planting.

Trees for Rural Roads

In partnership with the Municipality of Clarington and Central Lake Ontario Conservation Authority, over 700 trees were provided for free to residents of Clarington to be planted along municipal roads. The goal of the Trees for Rural Roads program is to restore trees along roadways for the cultural and natural heritage value they provide.

Yellow Fish Road

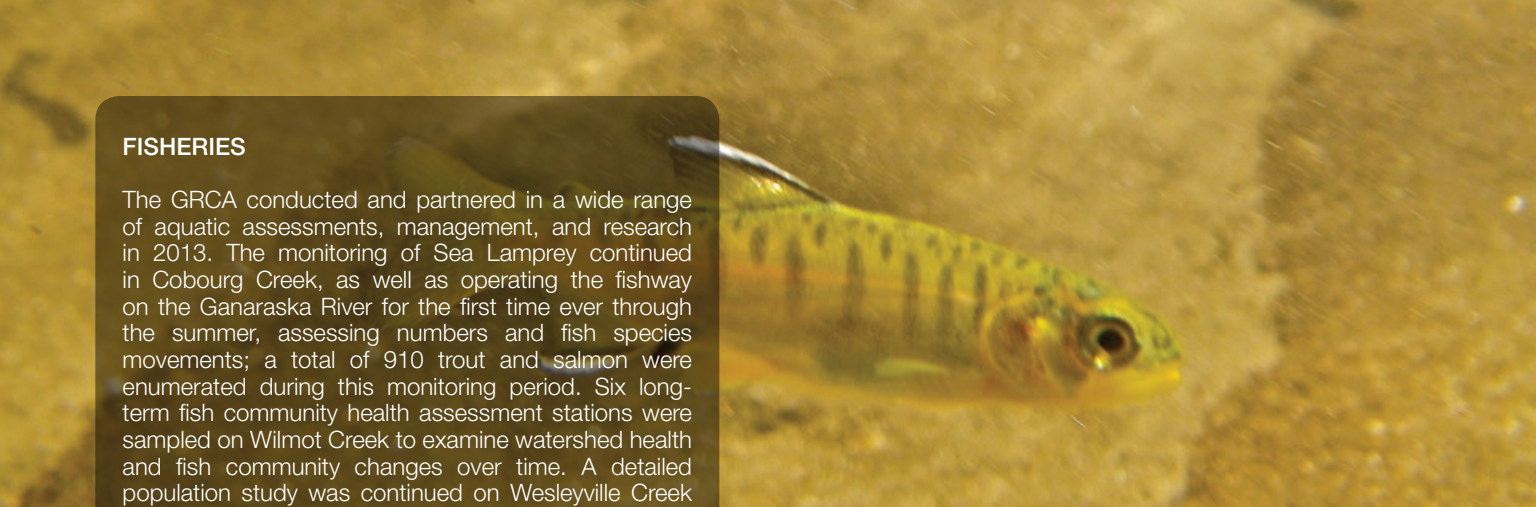
\$25,000.00 was provided through the Great Lakes Community Guardian Fund to deliver the Yellow Fish Road Program. This funding resulted in 11 school/club presentations, 658 storm drains painted with yellow fish, and 1,700 fish brochures distributed by 122 youth and 19 adults.

Buttercup Hollow

In June 2013, Buttercup Hollow (Orono Park) celebrated its 90th anniversary, and the GRCA partnered with the community and the Municipality of Clarington to enhance the park. Over 300 trees and shrubs were planted along Orono Creek with assistance from staff, students and volunteers of Orono Public School. GRCA staff also assisted in the design and build of the new shade shelter.

Planting Along the Ganaraska River

A new partnership with Enbridge Inc. resulted in 1.7 km of the Ganaraska River riparian area being restored with 1,400 native trees and shrubs planted by 109 local volunteers, and 385m of stream was fenced from livestock.



FISHERIES

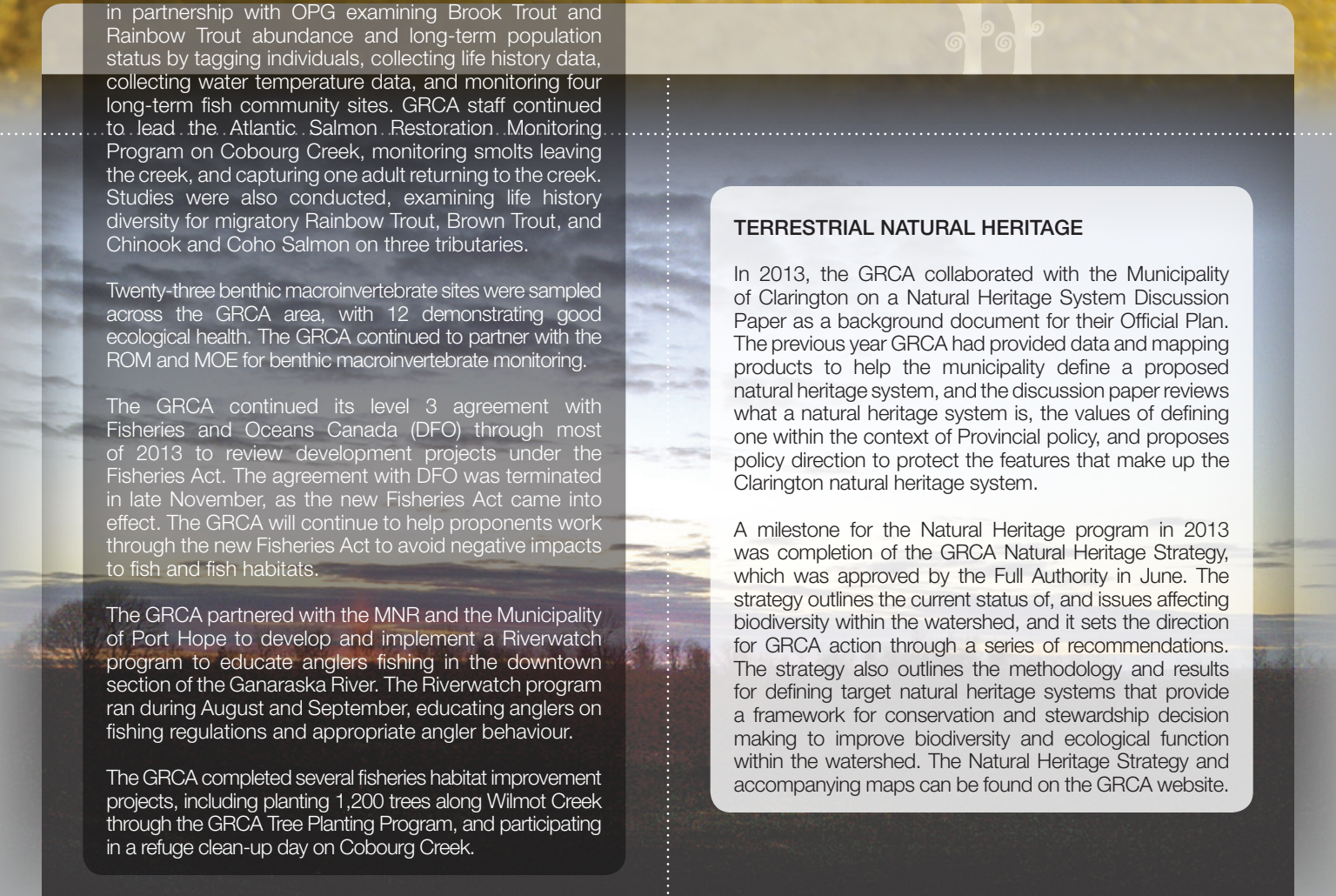
The GRCA conducted and partnered in a wide range of aquatic assessments, management, and research in 2013. The monitoring of Sea Lamprey continued in Cobourg Creek, as well as operating the fishway on the Ganaraska River for the first time ever through the summer, assessing numbers and fish species movements; a total of 910 trout and salmon were enumerated during this monitoring period. Six long-term fish community health assessment stations were sampled on Wilmot Creek to examine watershed health and fish community changes over time. A detailed population study was continued on Wesleyville Creek in partnership with OPG examining Brook Trout and Rainbow Trout abundance and long-term population status by tagging individuals, collecting life history data, collecting water temperature data, and monitoring four long-term fish community sites. GRCA staff continued to lead the Atlantic Salmon Restoration Monitoring Program on Cobourg Creek, monitoring smolts leaving the creek, and capturing one adult returning to the creek. Studies were also conducted, examining life history diversity for migratory Rainbow Trout, Brown Trout, and Chinook and Coho Salmon on three tributaries.

Twenty-three benthic macroinvertebrate sites were sampled across the GRCA area, with 12 demonstrating good ecological health. The GRCA continued to partner with the ROM and MOE for benthic macroinvertebrate monitoring.

The GRCA continued its level 3 agreement with Fisheries and Oceans Canada (DFO) through most of 2013 to review development projects under the Fisheries Act. The agreement with DFO was terminated in late November, as the new Fisheries Act came into effect. The GRCA will continue to help proponents work through the new Fisheries Act to avoid negative impacts to fish and fish habitats.

The GRCA partnered with the MNR and the Municipality of Port Hope to develop and implement a Riverwatch program to educate anglers fishing in the downtown section of the Ganaraska River. The Riverwatch program ran during August and September, educating anglers on fishing regulations and appropriate angler behaviour.

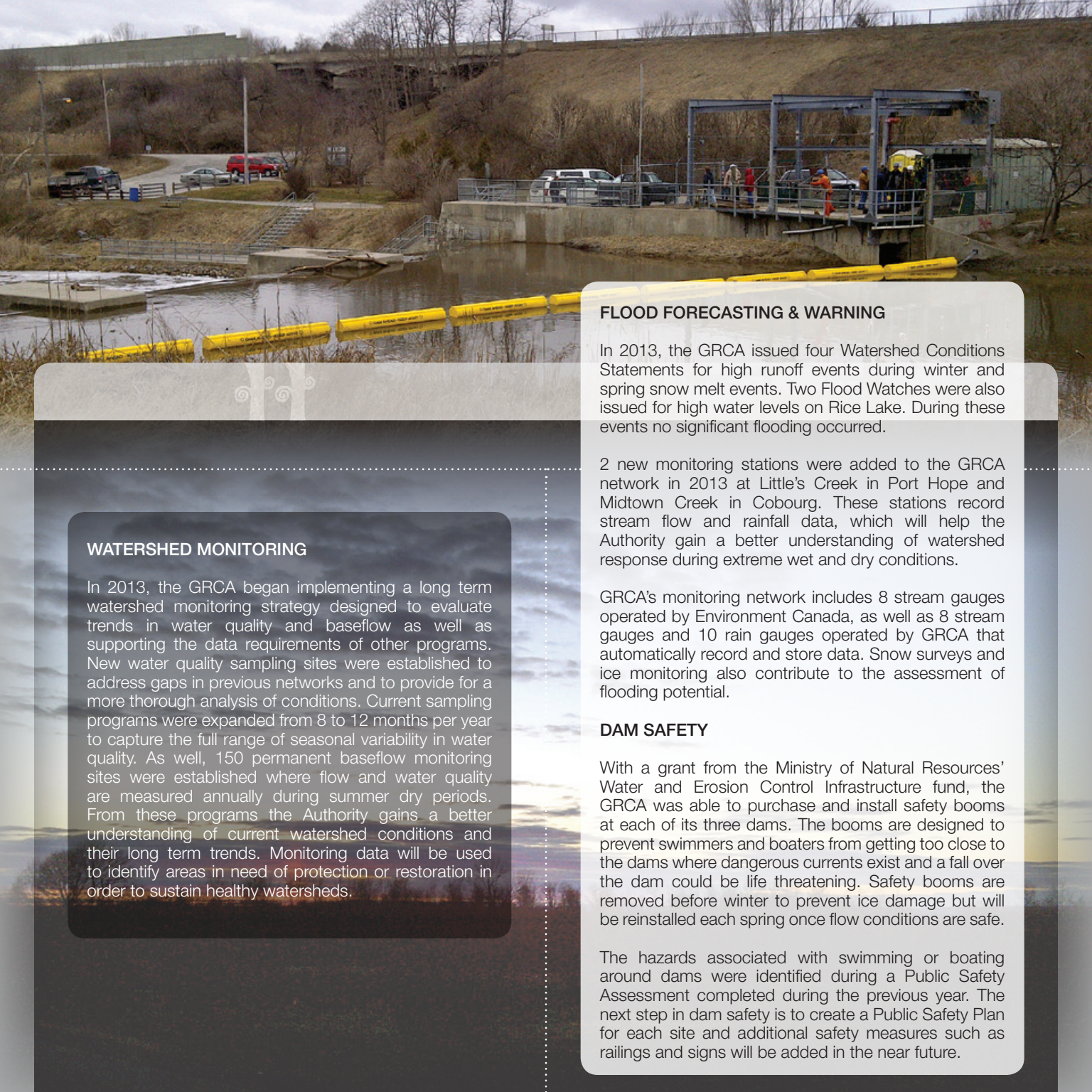
The GRCA completed several fisheries habitat improvement projects, including planting 1,200 trees along Wilmot Creek through the GRCA Tree Planting Program, and participating in a refuge clean-up day on Cobourg Creek.



TERRESTRIAL NATURAL HERITAGE

In 2013, the GRCA collaborated with the Municipality of Clarington on a Natural Heritage System Discussion Paper as a background document for their Official Plan. The previous year GRCA had provided data and mapping products to help the municipality define a proposed natural heritage system, and the discussion paper reviews what a natural heritage system is, the values of defining one within the context of Provincial policy, and proposes policy direction to protect the features that make up the Clarington natural heritage system.

A milestone for the Natural Heritage program in 2013 was completion of the GRCA Natural Heritage Strategy, which was approved by the Full Authority in June. The strategy outlines the current status of, and issues affecting biodiversity within the watershed, and it sets the direction for GRCA action through a series of recommendations. The strategy also outlines the methodology and results for defining target natural heritage systems that provide a framework for conservation and stewardship decision making to improve biodiversity and ecological function within the watershed. The Natural Heritage Strategy and accompanying maps can be found on the GRCA website.



WATERSHED MONITORING

In 2013, the GRCA began implementing a long term watershed monitoring strategy designed to evaluate trends in water quality and baseflow as well as supporting the data requirements of other programs. New water quality sampling sites were established to address gaps in previous networks and to provide for a more thorough analysis of conditions. Current sampling programs were expanded from 8 to 12 months per year to capture the full range of seasonal variability in water quality. As well, 150 permanent baseflow monitoring sites were established where flow and water quality are measured annually during summer dry periods. From these programs the Authority gains a better understanding of current watershed conditions and their long term trends. Monitoring data will be used to identify areas in need of protection or restoration in order to sustain healthy watersheds.

FLOOD FORECASTING & WARNING

In 2013, the GRCA issued four Watershed Conditions Statements for high runoff events during winter and spring snow melt events. Two Flood Watches were also issued for high water levels on Rice Lake. During these events no significant flooding occurred.

2 new monitoring stations were added to the GRCA network in 2013 at Little's Creek in Port Hope and Midtown Creek in Cobourg. These stations record stream flow and rainfall data, which will help the Authority gain a better understanding of watershed response during extreme wet and dry conditions.

GRCA's monitoring network includes 8 stream gauges operated by Environment Canada, as well as 8 stream gauges and 10 rain gauges operated by GRCA that automatically record and store data. Snow surveys and ice monitoring also contribute to the assessment of flooding potential.

DAM SAFETY

With a grant from the Ministry of Natural Resources' Water and Erosion Control Infrastructure fund, the GRCA was able to purchase and install safety booms at each of its three dams. The booms are designed to prevent swimmers and boaters from getting too close to the dams where dangerous currents exist and a fall over the dam could be life threatening. Safety booms are removed before winter to prevent ice damage but will be reinstalled each spring once flow conditions are safe.

The hazards associated with swimming or boating around dams were identified during a Public Safety Assessment completed during the previous year. The next step in dam safety is to create a Public Safety Plan for each site and additional safety measures such as railings and signs will be added in the near future.



NATURAL HAZARDS

Five projects were undertaken, or continued, to address natural hazards in the town of Cobourg and the Municipality of Clarington.

Midtown Creek Flood Damage Reduction Pond Conceptual Design and Location

The positioning of a flood control pond on Midtown Creek to address existing flooding issues was evaluated. This included considering three sites within varying topographic and hydrologic conditions; one site was recommended for detailed design.

Brook Creek Flood Damage Centers Evaluation

Flood damage depths found within the Brook Creek flood damage centers were surveyed using GPS RTK surveys and traditional survey equipment. Data from this work determined flood depths that could be tolerated before damage to residents occurred.

Brook Creek Flood Damage Reduction Pond

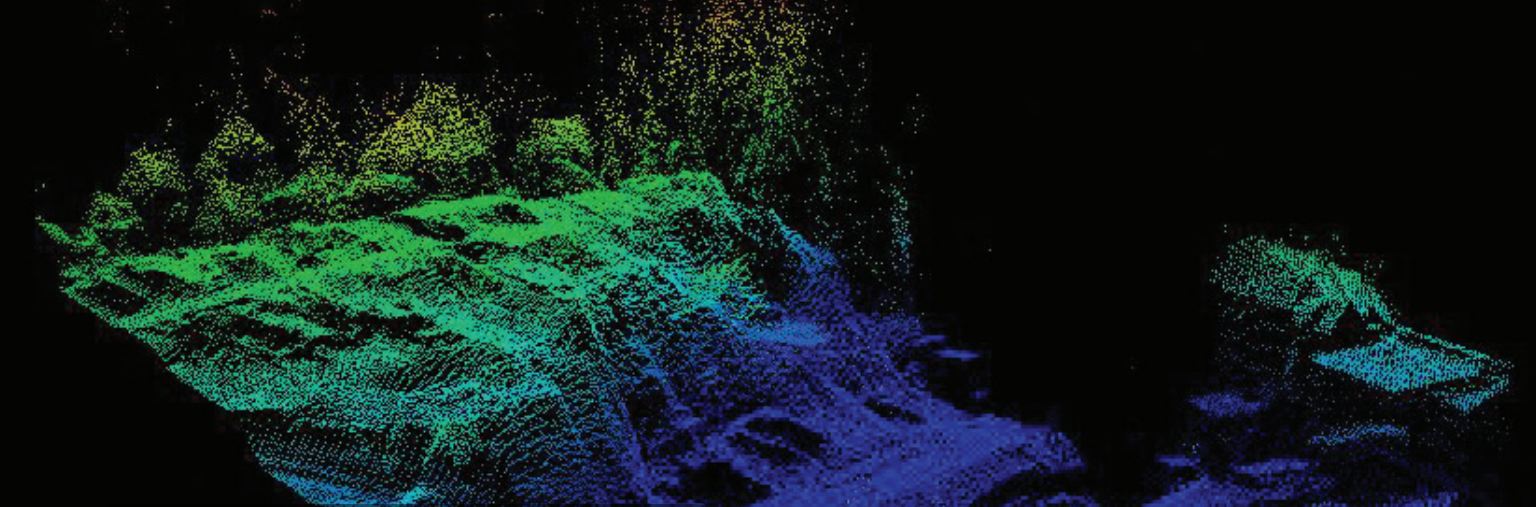
Based on the results of the previous evaluation, the feasibility of addressing flood targets with the construction of a flood control pond(s) was assessed. Recommendation regarding pond locations and achievable flood reduction targets were prepared.

Brook Creek Erosion Control Study

Work included analyse of erosion within the section of the main branch of Brook Creek, from the railway tracks to Lake Shore Drive. This will include topographic data sufficient to determine erosion forces within the creek and maximum permissible erosion forces that can be allowed given future build out upstream of the area.

Foster Creek Floodline Mapping

Work included analyse of flows and survey of Foster Creek within the community of Newcastle. This information is being used by AECOM consulting to prepare new floodlines and bridge designs for the community.



PLAN REVIEW AND REGULATIONS

In 2013, Municipal Plan Input and Review Department provided input on a total of 77 municipally circulated Planning Act applications (i.e. land severances, zoning or official plan amendments). Comments and recommendations on the natural hazard, and natural heritage policies consistent with the Provincial Policy Statement, were provided to watershed municipalities for consideration in their role as approval authority. Ongoing review and input on 8 subdivisions across the watershed continued in 2013 in addition to 5 new draft plans of subdivision. A total of 13 site plan applications for major development proposals (i.e. commercial, industrial sites) were reviewed. In addition, a total of 104 pre-consultation/inquiries were responded to. The GRCA provided plan input into the Town of Cobourg's Comprehensive Zoning By-Law review in addition to the Municipality of Clarington's Official Plan update.

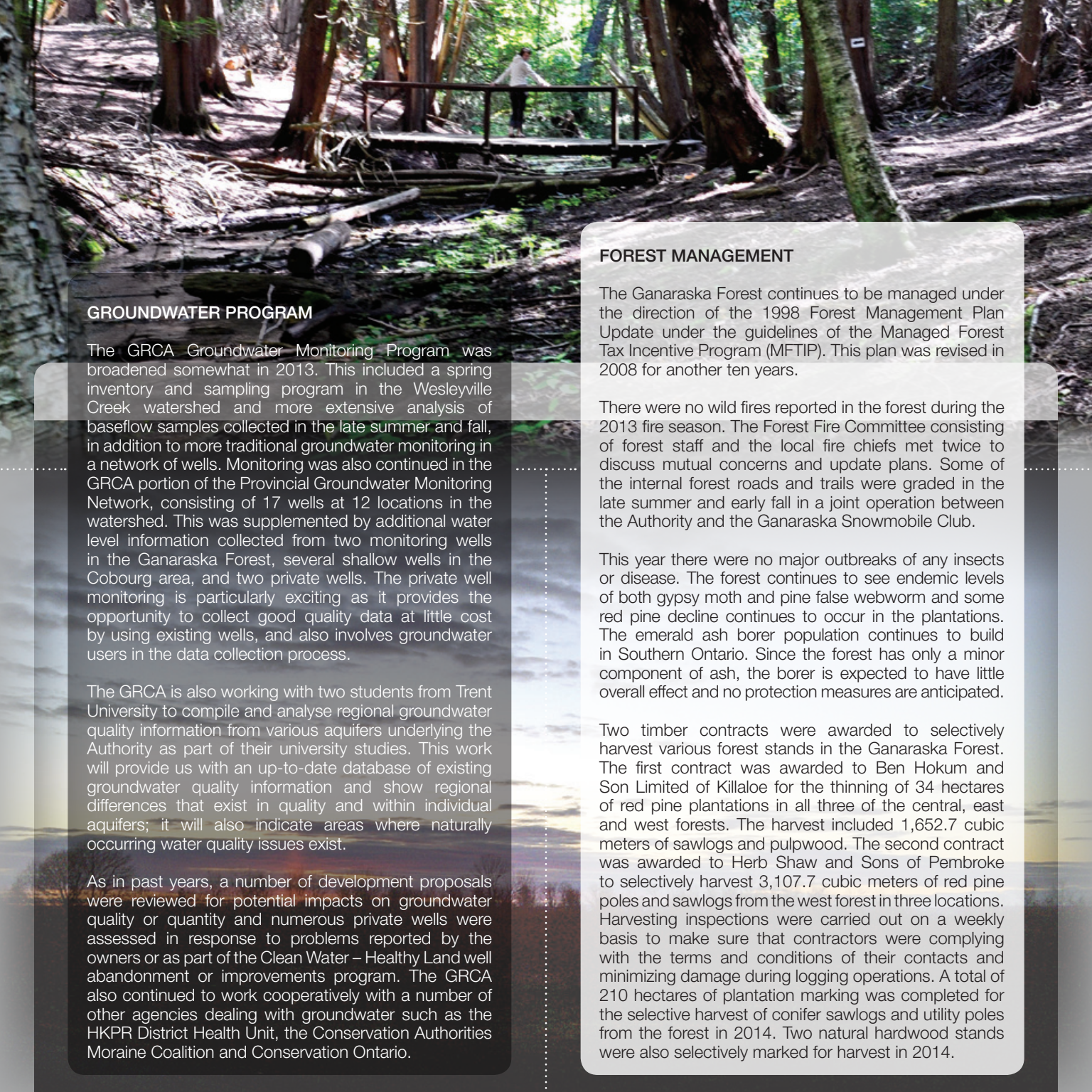
The GRCA issued a total of 67 permits for work under its Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation (Ont. Reg. 168/06), and 1 Violation Notice. Beginning in April, a process to update the Board Approved Policies under which applications for permission under Ontario Regulation 168/06 are assessed was initiated. Following public and municipal consultation, open houses, and revisions based on input received, a new policy was adopted by the Board at their January 2014 meeting. The Policies for the Implementation of Ontario Regulation 168/06 document can be obtained from our website, and will provide a consistent, timely, and transparent decision making framework for assessing applications for development within regulated areas, in addition to alteration to or interference with watercourses and wetlands.



GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

The GRCA's GIS department spent this year supporting many Watershed Services projects, including the continued partnership with the Municipality of Port Hope to provide GIS and mapping support to all departments including parcel fabric and zoning layers. The Authority has also reached out to neighbouring CA's to provide support and expertise in GIS and Remote Sensing.

The Authority continued the successful delivery of required reporting for the Ministry of Environments Showcasing Water Innovations (SWI) funding program. The program was a match funding program where the GRCA pooled its partner projects with capital projects and was awarded \$220,000.00 dollars over three years. The focus is on the interface between Engineering and GIS, and how it can work better in Water Resource Management. The project is on time and on budget as we move into the final year in 2014.



GROUNDWATER PROGRAM

The GRCA Groundwater Monitoring Program was broadened somewhat in 2013. This included a spring inventory and sampling program in the Wesleyville Creek watershed and more extensive analysis of baseflow samples collected in the late summer and fall, in addition to more traditional groundwater monitoring in a network of wells. Monitoring was also continued in the GRCA portion of the Provincial Groundwater Monitoring Network, consisting of 17 wells at 12 locations in the watershed. This was supplemented by additional water level information collected from two monitoring wells in the Ganaraska Forest, several shallow wells in the Cobourg area, and two private wells. The private well monitoring is particularly exciting as it provides the opportunity to collect good quality data at little cost by using existing wells, and also involves groundwater users in the data collection process.

The GRCA is also working with two students from Trent University to compile and analyse regional groundwater quality information from various aquifers underlying the Authority as part of their university studies. This work will provide us with an up-to-date database of existing groundwater quality information and show regional differences that exist in quality and within individual aquifers; it will also indicate areas where naturally occurring water quality issues exist.

As in past years, a number of development proposals were reviewed for potential impacts on groundwater quality or quantity and numerous private wells were assessed in response to problems reported by the owners or as part of the Clean Water – Healthy Land well abandonment or improvements program. The GRCA also continued to work cooperatively with a number of other agencies dealing with groundwater such as the HKPR District Health Unit, the Conservation Authorities Moraine Coalition and Conservation Ontario.

FOREST MANAGEMENT

The Ganaraska Forest continues to be managed under the direction of the 1998 Forest Management Plan Update under the guidelines of the Managed Forest Tax Incentive Program (MFTIP). This plan was revised in 2008 for another ten years.

There were no wild fires reported in the forest during the 2013 fire season. The Forest Fire Committee consisting of forest staff and the local fire chiefs met twice to discuss mutual concerns and update plans. Some of the internal forest roads and trails were graded in the late summer and early fall in a joint operation between the Authority and the Ganaraska Snowmobile Club.

This year there were no major outbreaks of any insects or disease. The forest continues to see endemic levels of both gypsy moth and pine false webworm and some red pine decline continues to occur in the plantations. The emerald ash borer population continues to build in Southern Ontario. Since the forest has only a minor component of ash, the borer is expected to have little overall effect and no protection measures are anticipated.

Two timber contracts were awarded to selectively harvest various forest stands in the Ganaraska Forest. The first contract was awarded to Ben Hokum and Son Limited of Killaloe for the thinning of 34 hectares of red pine plantations in all three of the central, east and west forests. The harvest included 1,652.7 cubic meters of sawlogs and pulpwood. The second contract was awarded to Herb Shaw and Sons of Pembroke to selectively harvest 3,107.7 cubic meters of red pine poles and sawlogs from the west forest in three locations. Harvesting inspections were carried out on a weekly basis to make sure that contractors were complying with the terms and conditions of their contracts and minimizing damage during logging operations. A total of 210 hectares of plantation marking was completed for the selective harvest of conifer sawlogs and utility poles from the forest in 2014. Two natural hardwood stands were also selectively marked for harvest in 2014.



GANARASKA FOREST CENTRE

2013 was a banner year for attendance at the Ganaraska Forest Centre, with over 20,000 people visiting the facility. The year was not without its challenges; in part, due to a five-month moratorium on extracurricular activities by public school boards. Creatively, the Outdoor Education Program took to the road and brought activities into schools through a newly created Outdoor Ed.'s On a Roll program. The project introduced nearly 2,000 students in 31 schools to the wide variety of programs offered by the education department.

The Centre, with accommodations for up to 86 people, a large Great Hall banquet facility and full commercial kitchen, was also the venue of choice for 25 weddings and was the weekend home to over 20 Scouts, Brownies or Cadet troupes throughout 2013.

When the Centre wasn't busy with weekend bookings, the GRCA's public events continued to attract audiences. Events including Maple Syrup Day, Halloween Howl and Owl Prowl offered participants fun experiences in the great outdoors.

GRCA's Nature Nuts Summer Camp, taught by Ganaraska Forest Centre Outdoor Education Instructors, brought in 128 children who were keen to learn more about nature and what it has to offer.

FOREST RECREATION

2013 was a busy year for recreation in the Ganaraska Forest with approximately 2000 forest memberships purchased, representing a 15% increase over the total sold in 2012. The most popular forms of recreational use include off-road vehicle riding, horseback riding and mountain biking.

A number of exciting new developments took place this year. The Conservation Authority entered into a partnership with the Friends of the Greenbelt Foundation's Greenbelt Walks Program. This program is designed to get the public out exploring various trails within Ontario's Greenbelt and will serve to raise awareness of Ganaraska Forest trails.

As a result of a second newly formed partnership, visitors were able to enjoy guided horseback trail rides while at the Ganaraska Forest Centre. Last spring, the GRCA teamed up with Maple Crescent Farms, a local riding stable, who provided trail rides on weekends during the summer and early fall. The success of this project led to the decision to continue the partnership next year.

Another partner, Treetop Trekking Ganaraska, completed its second year of operation in 2013, and business increased substantially with close to 10,000 climbers enjoying the experience of trekking through the aerial park.

Mountain bike riders were pleased to see the addition of 6 kilometres of new single-track trail to the Central Forest. This section of trail has been added to the International Mountain Bike Association's Epic Trail and provides some of the finest riding in Ontario.

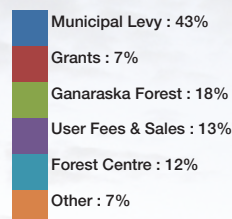
FINANCIAL SUMMARY

In 2013, the budget totalled \$3,264,878.00; however a significant project, for nearly \$250,000.00 which was expected in 2013, did not move forward and therefore reduced the actuals. The municipal general levy was increased by 1.25% assessment growth and a 1.25% economic adjustment, and then adjusted to reflect a corrected allocation funding formula. The general levy for 2013 was \$850,312.00 which represents about 28% of the total revenues.

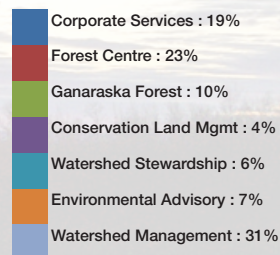
This past year there were several capital projects within the Conservation Authority, which were mainly funded by the watershed municipalities and described within the annual report. The GRCA continues to partner with others on important initiatives. As well, the Source Protection Planning Program continued; this project remains fully funded by the province.

The chart (right) shows the revenues for 2013. The levy shown is a combined total of general and benefitting levy. The Ganaraska Forest timber sales of \$278,176.00 and memberships of \$238,024.00, as well as the revenues from Treetop Trekking Ganaraska of \$43,810.00, are included in the Ganaraska Forest revenue. The User Fees & Sales consist of the revenues from the stewardship programs, watershed services, as well as the water resources fees. The category of "Other" includes direct funded projects of the Conservation Authority. This includes \$121,783.00 for the Trent Conservation Coalition Source Water Protection initiative.

REVENUES



EXPENDITURES - (DOES NOT INCLUDE AMORTIZATION)





2013 GRCA Full Authority Board (as of February 2013)

Forrest Rowden, Chair	Town of Cobourg
Wendy Partner, Vice-Chair	Municipality of Clarington
Raymond Benns	Township of Alnwick/Haldimand
Mark Lovshin	Township of Hamilton
Heather Stauble	City of Kawartha Lakes
John Fallis	Township of Cavan Monaghan
Linda Thompson	Municipality of Port Hope
Mary Lou Ellis	Municipality of Port Hope
Miriam Mutton	Town of Cobourg
Willie Woo	Municipality of Clarington

2013 Ganaraska Region Conservation Authority Staff

Linda Laliberte	CAO/Secretary-Treasurer
Mark Peacock	Director, Watershed Services
Linda Givelas	Property Manager, Ganaraska Forest Centre
Greg Wells	Manager, Planning and Regulations
Amy Griffiths	Marketing and Communications Officer
Bob Penwell	Forester
Bonnie Ward	Assistant Stewardship Technician (April 2013 through October 2013)
Brenda Clancy	Ganaraska Forest Centre Cook
Brian Morrison	Fisheries Biologist
Christie Peacock	Water Resources Engineer
Cody Brown	GIS Technician
George Elgear	General Superintendant
Ian Jeffrey	GIS/Remote Sensing Technician
Jeff Moxley	GIS Coordinator
Jessica Mueller	GIS Technician
Joanne May	Administrative Assistant, Planning and Regulations
Julie Verge	Corporate Services Assistant
Ken Towle	Terrestrial Ecologist
Kim Baldini	Corporate Services Finance Clerk
Lindsay Theriault	Ganaraska Forest Centre Outdoor Education Instructor
Michelle Giddings	Bookkeeper
Mike Smith	Water Resources Technician
Pam Lancaster	Stewardship Technician/Source Water Protection Technician/Communications
Ralph Shaw	Ganaraska Forest Centre Outdoor Education Instructor
Robert Betcher	Hydrogeologist
Ryan Goodall	Ganaraska Forest Centre Outdoor Education Instructor
Sable Guttman	Gatehouse Keeper/Ganaraska Forest Centre Weekend Technician
Shayne Pilgrim	Ganaraska Forest Centre Technician
Steve McMullen	Ganaraska Forest Recreation Technician
Susan Milton	Ganaraska Forest Centre Assistant Cook

Ganaraska Region Conservation Authority **2013** ANNUAL REPORT



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Ganaraska Region Conservation Authority staff.
Tim Bermingham (front cover)



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