



Ganaraska Region Conservation Authority 2020 Annual Report

Clean water, healthy land for healthy communities.

February 12, 2021



A YEAR IN REVIEW

2020 was a difficult year for the World. What started in January as a seemingly “normal year”, quickly became a year which demanded some change in the way most programs were being delivered and the end of other programs. Staff transitioned into working remotely via phone and email communications; offices and other authority buildings were renovated to keep staff and visitors safe when re-opening could occur; new programs were developed; pivoting took place across the whole organization. Spring and summer 2020 saw a few ups and downs, including the cancellation of the annual Ontario Federation of Anglers and Hunters/[Ganaraska Forest Centre](#) (GFC) Conservation Dinner and [Ganaraska Region Conservation Authority](#) (GRCA) public events; the temporary closure of the Ganaraska Forest and GRCA's Conservation Areas; revamping of Nature Nuts Summer Camp; all the while, the GRCA pushed on. In the fall of 2020, Conservation Authorities across Ontario were faced with additional challenges when the Province announced, under the semblance of Bill 229: *Protect, Support and Recover from Covid-19 Act (Budget Measures)*, Schedule 6. After months of dealing with the adverse affects of COVID-19 on operations, the Provincial Government introduced legislative changes to the *Conservation Authorities Act* with no prior consultation with Conservation Authorities. The GRCA pushed forward, supporting Conservation Ontario, its fellow Conservation Authorities, municipalities and all environmental organizations affected by these proposed changes which passed in the legislature on December 8, 2020. For the remainder of the year, the GRCA continued to deliver stellar programs aimed to further the conservation, restoration, development and management of natural resources within local watersheds.

Moving into the 75th year serving the Ganaraska watershed,

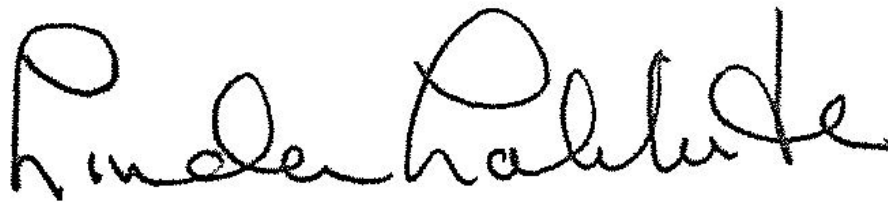
your local conservation authority remains dedicated to the environment and to enhancing and conserving across the Ganaraska Region Watershed by serving, educating, informing and engaging.

Yours in Conservation,

A handwritten signature in black ink, appearing to read "Jeff Lees". The signature is stylized with large, bold letters and a cursive flourish at the end.

Jeff Lees

Chair, Board of Directors

A handwritten signature in black ink, appearing to read "Linda J. Laliberte". The signature is written in a cursive style with large, flowing letters.

Linda J. Laliberte, CPA, CGA

CAO/Secretary-Treasurer

SPECIAL THANKS

Thank you to Ontario Power Generation for their continued support of the Spring Water Awareness Program (SWAP) for

grade 4 students across the watershed. In 2020, funding allowed the GRCA to present to 13 classes about why it is important to 'Stay Away!' from ice-strewn beaches and frozen creeks and rivers.

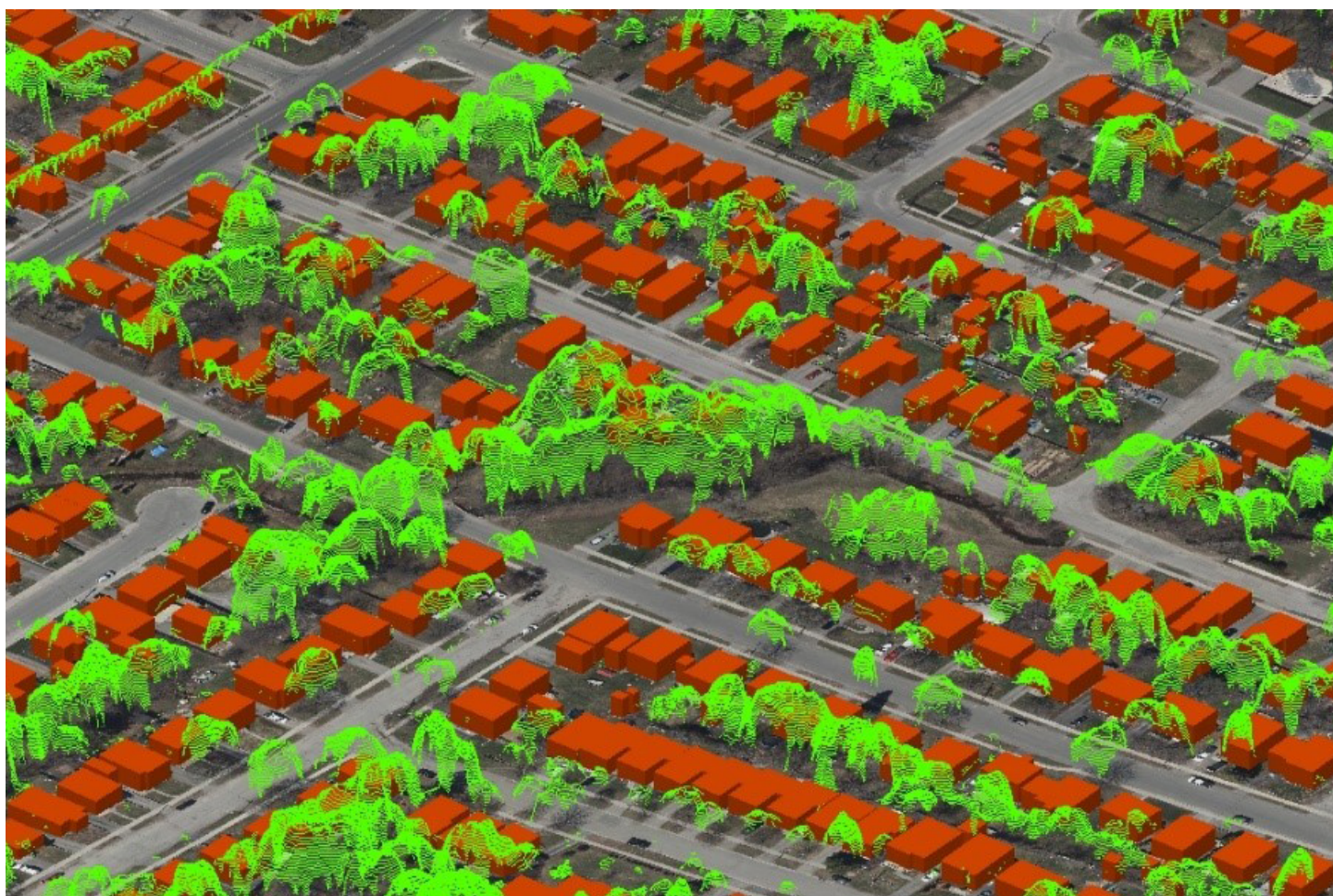
Thank you to Canada Summer Jobs for enhancing the wages of four summer students in support of their career pursuits. The GRCA's Nature Nuts Summer Camp and Water Resources program benefited from the extra sets of hands; while conservation lands, including the gardens at the Ganaraska Forest Centre, all were kept up to par by the hard-working students.

Another year of thanks to the Peterborough Trail Riders Association and the Ganaraska Forest Horse Club for their continued support of the Ganaraska Forest, developing and maintaining trails. The Conservation Authority is thankful of forest recreation users who respected the short closures due to Covid-19; and continue to practice physical-distancing on the trails and within forest parking lots. The GRCA also continues to be grateful for the Ganaraska Forest Recreational Users Committee, Ontario Federation of Trail Riders, Ganaraska Snowmobile Club, and those who volunteer their time as forest patrollers; your support is invaluable.

A special thanks goes out Peter, Julie and the team at Universal Protection Agency. Your contributions in the Ganaraska Forest has changed the way the forest is used day in and day out. Your volunteered service to patrol the forest trails, provide guidance and enforcement is helping make the forest a better place for everyone.

Thanks also to Steve and Zach Grove of Springs Grove for their support with the culvert restoration project on the main road leading into the Ganaraska Forest.

The GRCA extends their thanks to our watershed communities, and encourages you to review our 2020 undertakings highlighted in this report.



GEOGRAPHIC INFORMATION SYSTEM (GIS)

The GRCA's GIS department continues to support many Watershed Services projects year after year; including the soil vulnerability project, Flood Forecasting and Warning, Aquatic and Terrestrial Ecology, and other monitoring programs.

The team has implemented a full suite of web mapping applications to support existing workflows within the different departments of the Conservation Authority, including the watershed services programs mentioned above as well as stewardship, forestry and recreation.

GIS continues to provide leadership and support in Geospatial

Sciences to neighbouring partners and stakeholders. This important work is slated to continue to grow steadily into 2021.

The Conservation Authority looks forward to continuing to apply innovative and cost effective ways of leveraging 3D elevation and remote sensing GIS data to maximize efficiency of daily workflows in support of climate change adaption and mitigation, watershed hydrology, environmental modeling, and urban forestry to name a few.

GRCA will continue to work closely with federal, provincial, and other partners in developing effective technical solutions to pressing water resource issues, namely flood disaster mitigation and climate change.



STEWARDSHIP

During 2020, and in spite of Covid-19, the GRCA was able to offer a wide variety of stewardship programs to assist watershed residents in achieving their environmental restoration goals. Whether it is upgrading a water well to current standards, planting a pollinator garden or conserving rainwater, the GRCA is able to lend a hand. Unfortunately, volunteer events and schoolyard tree plantings were cancelled or postponed.

The Conservation Authority continued to offer financial assistance to individuals, clubs, schools or businesses within the Municipality of Clarington, Municipality of Port Hope, Township of Hamilton and Town of Cobourg for stewardship activities. Through the Clean Water-Healthy Land Financial Assistance Program (CWHLFAP), 20 environmental projects received funding for a total allocation of \$52,755.00. The total monetary value of these projects was approximately \$205,724.00.

The CWHLFAP supports the implementation of recommendations of GRCA Watershed Plans, Natural Heritage Strategy and many other planning documents. The CWHLFAP is supported by the above mentioned municipalities, as well as the Regional Municipality of Durham and Lakefront Utility Services Inc.

Over 78,000 trees and shrubs were planted across local watersheds through various programs. Trees and shrubs are available for sale through the GRCA Tree Seedling Program, or are provided for free through the Trees for Rural Roads program offered in partnership with the Municipality of Clarington and the Municipality of Port Hope. For those landowners with larger properties to plant, reforestation services were also delivered, with funding provided through Forest Ontario and the Highway of Heroes Tree Campaign. Although 2020 faced many challenges in delivering tree

programs, the GRCA, with its partners, were successful in delivering and planting trees. Unfortunately, drought like conditions shortly after planting resulted in less than desirable tree survival rates in some parts of the watershed.

The GRCA continued to support the Highway of Heroes Tree Campaign (HOHTC), which has a goal to plant 2-Million trees along the Highway of Heroes as a living tribute to the men and women who fought for Canada in our wars, and a living memorial to the 117,000 who died for our freedom. Through this partnership, April Stevenson, Tree Planting Stewardship Manager at the HOHTC, continued to support the various GRCA tree programs.

The Town of Cobourg Water Conservation Garden, located at the intersection of Ewart Street and Division Street, underwent a renovation in 2020. Similar to a homeowner's perennial garden, plants can become overgrown and unmanageable and require regular pruning and maintenance. In partnership with Lakefront Utility Services Inc. and generous donations from Ontario Power Generation and Enbridge Inc., the gardens have been transformed into a semi-formal garden with elements of zeroscape and xeriscape, designed and installed by Green Side Up Environmental Services and Landscaping. Zeroscape uses stone and rock and allows for minimal maintenance while still allowing for water conservation/xeriscape principles. Now, visitors of the gardens can see distinctive groups of native plants that are used to add colour, texture, and general interest throughout the seasons.

AGRICULTURAL STEWARDSHIP AND RESEARCH

In early 2020, the GRCA became formal partners in a collaborative initiated by the Quinte Soil and Crop Improvement Association. The Quinte Farm Research and

Stewardship Collaborative (QFRSC) focus is on soil health and water quality and the establishment of a network of farmers that will look at modern agriculture, best management practices and effects on water quality and soil health/conservation. Together the membership includes farmers, university researchers and conservation authorities in Northumberland, Hastings, Prince Edward, and Lennox & Addington counties. The overall goal of the QFRSC is to improve field-level understanding of soil health and water quality for the benefit of field productivity and the protection of surface and groundwater resources.

As part of QFRSC, the GRCA is undertaking a soil erosion and nutrient loss vulnerability assessment. The goal of this multi-year project is to understand and mitigate soil and nutrient loss from farm fields into local rivers and Lake Ontario. The components of the project include:

1. Define, model and map soil and nutrient loss potential for the GRCA jurisdiction.
2. Enhance GRCA and local capacity to offer services to the farm community in relation to in-field soil and erosion control structures.
3. Carry out stewardship and education outreach, as well as field level project implementation in the farm community in order to see reductions in soil and nutrient loss and in-field productivity through collaborative implementation of in-field soil and erosion control structures and other best management practices.



DRINKING WATER SOURCE PROTECTION

2020 marked 20 years since the Walkerton Tragedy. The Town of Walkerton, Ontario suffered an *E.coli* outbreak in their municipal drinking water, resulting in the death of 7 people and 2,300 people becoming very ill, many of which were left with chronic health issues such as liver damage. There were a multitude of factors that led to the tragedy, including an improperly constructed well, a contaminated water source, inadequate training and education of public utilities staff, and insufficient reporting requirements to the Ministry of the Environment.

As a result of the tragedy, an independent Commission known as the Walkerton Inquiry was set up to examine the contamination of the water supply in Walkerton and to look into the future safety of the water supply in Ontario. A few of the key recommendations from the inquiry include:

- Plans to protect sources of drinking water should be developed on a watershed level, should be approved and reviewed by the Ministry of the Environment, but be prepared by local committees with local consultation and be managed by conservation authorities.
- All water should be continuously monitored, with alarms and automatic shut-off systems if something goes wrong.
- Training courses for all water systems operators should be required and accessible.

In order to implement recommendations of the Walkerton Report, the *Clean Water Act* was passed and the Drinking Water Source Protection Program was created as part of a multi-barrier approach to protect municipal sources of drinking water. Throughout 2020, the GRCA worked in partnership with its member municipalities to implement the Ganaraska Source Protection Plan, which came into effect in 2015. Provincial ministries, the GRCA and oil pipeline owners continue to implement all applicable policies.

In order to improve and adapt the Ganaraska Source Protection Plan and the Ganaraska Assessment Report (the science informing plan recommendations), work continued in 2020 to improve scientific understanding around municipal sources of drinking water and update and improve upon recommendations within the Plan. In addition, a new online reporting system was implemented to support municipalities in their reporting duties to the Ganaraska Region Source Protection Authority.

GROUNDWATER

Groundwater is an essential part of the hydrological cycle and is a valuable natural resource providing a primary source of water for agriculture, domestic, and industrial uses

throughout the Ganaraska Region Watershed. Many landowners depend on groundwater as their source for drinking water from private wells. Therefore, groundwater is critical to our communities, municipal water supplies, private water supplies, irrigation and for sustaining many streams, lakes, wetlands and other dependent ecosystems.

The key components of the groundwater program at Ganaraska Region Conservation Authority are:

- groundwater monitoring
- drinking water source protection
- drinking water stewardship
- technical report review
- public outreach, education and communications

As such, GRCA groundwater wells within the watershed are monitored for water levels and ambient water quality as part of the Provincial Groundwater Monitoring Network and other well networks.

Support was given to the Regional Municipality of Durham regarding an update of the Orono Municipal Water Supply System Wellhead Protection Areas Capture Zone numerical modelling, which informed the Source Water Protection Assessment for that area.

As part of the technical review of planning and permit applications, hydrogeological and geotechnical reports are reviewed to ensure that any potential adverse impacts of development on water quantity and quality are minimized and the integrity of hydrological functions is maintained as mandated by the *Provincial Policy Statement, 2020*.

Present and future consequences from changes in weather patterns at local and regional levels on water supply, and the

interconnectedness of surface and groundwater resources are of particular interest to the GRCA. Within the GRCA watershed, climate change is anticipated to result in milder, shorter winters with earlier snowmelt, less ice cover on lakes, changing rainfall patterns and increased evapotranspiration. The complexity of groundwater systems make it difficult to assess whether groundwater levels have changed since records began. However, it is known that the timing of snow and rainfall events, increased risk of drought and reduced soil moisture, and higher evaporation rates work to reduce recharge rates and groundwater levels. Extreme rainfall events do not necessarily effectively contribute to aquifer recharge rates because much of the water is lost as overland flow and runoff. Therefore, in areas that do experience increased rainfall due to climate change, the form of precipitation and the timing may in fact reduce groundwater recharge rates.

In order to help understand the complexity of water resources and climate change, the GRCA has started to develop a strategy, utilizing a variety of provincially recommended software, to analyse potential impacts of changing weather patterns. The aim is to assess and coordinate future adaptive activities and projects that will increase the resilience of the natural environment within the GRCA and to help protect residents. In time, municipalities, policy makers and other interested stakeholders will have information to manage risks once vulnerabilities are understood.



AQUATIC ECOLOGY

In 2020, the GRCA continued their partnership with the Sea Lamprey Control Center and the monitoring of the Cobourg Creek Sea Lamprey weir. During the field season, the GRCA collected a total of 3,920 fish composed of 28 different species at the Sea Lamprey weir. In addition to the monitoring that occurred at Cobourg Creek, the GRCA continued their partnership with the Bring Back the Salmon Program. Although the program was cut short due to Covid-19 and the closure of schools, the program continued through the monitoring of Atlantic Salmon within Cobourg Creek.

The partnership with Ontario Power Generation (OPG), Hydro One and GRCA also continued this year. Much like past years, a detailed population study was conducted on Wesleyville Creek to examine Brook Trout and Rainbow Trout abundance and long-term population status. This study was conducted at

seven long-term monitoring sites, where fish communities were analyzed, Brook Trout were tagged, and water temperature, benthic macroinvertebrate and channel morphology data were collected. The information gathered through this study has been used to determine limiting factors for Brook Trout populations and determining priority restoration areas.

In November, the GRCA completed a fish rescue for the culvert restoration work at Cold Springs Camp Road near the Ganaraska Forest Center. During the fish rescue, a total of 81 Brook Trout and 5 Mottled Sculpin were netted. These fish were released outside of the construction zone.

TERRESTRIAL ECOLOGY

With a changing climate, the monitoring of local flora and fauna is critical for understanding the distribution of our regional biodiversity. In 2020, the GRCA continued their support for the Durham Region Coastal Wetland Monitoring Program and the Forest Bird Monitoring Program. During the partnership programs, both birds and/or frogs were monitored at long-term stations to determine the health of the wetland and forest. The long-term data that has been gathered can be used to determine if there has been a decline in the health of the natural feature.

In addition to partnership programs, the GRCA continued with invasive species monitoring in Conservation Areas. The information gathered through the monitoring will help to inform what areas need the most attention in regard to invasive species removal. In an effort to continue with the management of invasive species, the GRCA completed several invasive species removal projects during 2020, including:

- Removal and treatment of 2,036 m² of Phragmites in Millennium Conservation Area, with the support of the OPG Regional Biodiversity Program;
- Removal of three Giant Hogweed plants at Thurne Parks Conservation Area;
- Approximately 600 Wild Parsnip stems were treated over two days at the GRCA Administration Office;
- Treatment of a 25 m² patch of Japanese Knotweed population in the Ganaraska West Forest; and
- The removal and treatment of invasive species including Buckthorn, Autumn Olive, Scots Pine and Euonymus from the Ganaraska Forest Centre prairie demonstration site. The removal of invasive species resulted in approximately 10 trailer loads of material.



WATERSHED MONITORING

In 2020, the GRCA continued to implement its Watershed Monitoring Program to document watershed conditions, track trends in watershed health and identify priority areas in need of restoration. GRCA staff regularly monitor the quality and quantity of the water resources of the region as well as the terrestrial and aquatic organisms that inhabit our watersheds.

Over the summer, staff collected baseflow data from as many streams as possible during dry weather conditions to assess groundwater contributions (seeps and springs) that can vary from year to year. These seeps and springs provide all of the flow in our streams during the hot summer weather and are a constant source of high quality cold water providing a refuge for fish and aquatic insects.

In 2020, the GRCA continued to collect water quality samples to track conditions in our local streams as part of our Watershed Monitoring Plan. Through a partnership with the Toronto and Region Conservation Authority, staff collected storm event samples, contributing to the study of Lake Ontario water quality.

Monitoring the changes in baseflows from year to year is a good way to detect the impact of climatic variations on water resources, while changes in water quality can indicate how land use practices and other activities are impacting the health of our watersheds and Lake Ontario. Good stewardship practices can be used to improve ecosystem health while making watersheds more resilient to climate change.

FLOOD FORECASTING AND WARNING

On January 11th of 2020, a potent low pressure system arrived in Ontario bringing very strong winds and heavy rainfall. GRCA staff issued a Flood Watch as over 60mm of rain fell

throughout the day. The Ganaraska River peaked overnight at 85m³/s, which would be the highest flow recorded all year.

By March, heavy snow accumulation in the watersheds was raising concerns for spring flooding. Daily air temperatures began to rise, slowly melting the snow. Fortunately, no big rainfalls occurred while the majority of the snow melted away. The highest flows over the spring melt period occurred on March 10th when the air temperature rose above 10 degrees and with steady light rainfall, caused a peak flow on the Ganaraska River of 45m³/s.

Two more storms in April moved into the already saturated Ganaraska Region. No flooding occurred during these events and with warm weather in May, watershed conditions started to dry up. Like turning off a faucet, May, June and July all saw below normal rainfall resulting in the declaration of a minor drought condition according to the guidelines of the Ontario Low Water Response Program. After receiving less than 80% of the normal rainfall over the previous three months, the Ganaraska Water Response Team issued a Level 1 Low Water Advisory on July 16th. Conditions quickly improved though, as a few rainstorms came through in August. In particular, a morning thunderstorm on August 27th brought over 40mm, which provided enough rain to restore soil moisture and raise streamflows, ending the minor drought condition.

Lake Ontario water levels started well above normal in 2020 and with very high inflows from Lake Erie, there was great concern for repeat flooding along the shoreline. However, below normal rainfall through the spring and summer combined with very high outflows, allowed the water level to decrease significantly to nearly normal levels by the end of the year. The upstream Great Lakes are still experiencing very high water levels, so the inflows to Lake Ontario will remain high for some time and the risk of shoreline flooding will also

remain high during periods of above normal precipitation especially as the lake level reaches its seasonal high point in the early summer. Flood Watches for the Lake Ontario shoreline were issued by GRCA during two storm events in April of 2020. While the lake levels were less severe compared to 2019, these storm events included strong onshore winds that would cause wave uprush leading to erosion along the shoreline.



CLIMATE CHANGE

During 2020, variability in seasonal weather patterns and conditions were experienced across the watershed, including dry conditions in May through to July, eventually causing the GRCA to issue a Level 1 Low Water Advisory. These dry conditions did impact the survival of trees planted in the spring. Variabilities such as these means the GRCA needs to continually adapt programs and how we carry out the way we

do business. The GRCA also needs to continue to promote climate change mitigation and adaptation measures and to monitor our natural environment and report observed changes in order to ensure that our ecosystems remain healthy and resilient to change.

In order to accomplish some of the required adaptation, the GRCA completed a climate projections project in partnership with member municipalities and the Ontario Climate Consortium. The ability for the GRCA to undertake climate projection work was a result of the Regional Municipality of Durham desire to update climate projections for Durham Region and the ability of the GRCA to leverage the study further. This project provides projected climate data up to the year 2100 using an ensemble modeling approach. This new modeling approach will allow regional models that factor in the Great Lake to “speak” with global climate change models, resulting in more locally appropriate predictions. Parameters such as air temperature, precipitation, drought, freeze-thaw cycles will be analyzed and modeled. This work and other climate mitigation and adaptation initiatives are being implemented in partnership with member municipalities, other conservation authorities and local partners.

GRCA staff continued to implement actions in day-to-day business operations as recommended in our approved Climate Change Strategy. Additionally, staff worked with Carbon Zero to undertake a Corporate Greenhouse Gas (GHG) Inventory for the GRCA to assist with future planning efforts.



ENVIRONMENTAL ADVISORY PLANNING AND REGULATIONS

In 2020, GRCA provided input on 60 municipally circulated minor variances, severance, zoning and Official Plan amendments. Comments with respect to natural hazards and natural heritage, consistent with the *Provincial Policy Statement, 2020* were provided to our partner municipalities for their consideration as an approval authority. GRCA staff reviewed and provided input on 1 new subdivision and 9 ongoing subdivisions within the watershed. In addition, 21 site plan applications for major development proposals (i.e., commercial, industrial) were reviewed. GRCA received and provided responses on a total of 154 formal inquiries and/or pre-consultation requests. Furthermore, GRCA issued 96 permits under our *Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation (O.*

Reg. 168/06).

GRCA has provided input into such municipal initiatives as the Northumberland Next, Zone Clarington and Envision Durham. GRCA planning staff have continued on the Conservation Authority Section 28 Committee which seeks ways to improve service delivery standards. In addition, GRCA planning staff meet with the Greater Golden Horseshoe Planners, Northumberland Areas Planners and Conservation Authority Coastal Working Group to share ideas and ensure that staff have the most up-to-date knowledge on matters affecting Conservation Authorities. GRCA continued to provide strong customer service responding to many telephone inquiries, particularly with respect to real estate throughout the watershed.

NATURAL HAZARDS

Lake Ontario Shoreline Hazard Management Plan

In 2020, the GRCA, in collaboration with the Central Lake Ontario Conservation Authority, Lower Trent Conservation and consultant Zuzek Inc., completed the important work of preparing the Lake Ontario Shoreline Hazard Management Plan. The study prepared flooding and erosion hazard mapping for approximately 135 kilometers of shoreline (to replace a report originally produced in 1990), in addition to providing some general management recommendations. This work included a number of technical and steering committee meetings, preparation of a draft report and preliminary shoreline flood and erosion hazard mapping, and public consultation/request for public comments. The hazard mapping and report were finalized and this information will be used to inform updates and refinements to the GRCA's regulation mapping along the shoreline. Funding for this

project was provided in part through the federal National Disaster Mitigation Program (NDMP).

Port Hope Flood Plain Mapping Updates

In 2020, the GRCA commenced an update to the flood plain mapping for the Ganaraska River from Dale Road to the mouth of the river at Lake Ontario. The previous hydraulic model was imported into updated modeling software and integrated with a digital terrain model (DTM) surface and updated survey data for the existing bridge structures within the study area. A draft version of the hydraulic model and mapping has been produced and will be finalized in early 2021.



GANARASKA FOREST CENTRE (GFC)

The GFC is home to the GRCA's outdoor education program. In

a typical year, thousands of students would visit the GFC for exceptional outdoor programs that develop their attitudes, skills, and knowledge through an environmental lens. As a result of the necessary nation-wide Covid-19 response, and the preceding Province-wide teacher job action, 2020 was a year like no other for the GFC's education program. The GFC was shutdown in the spring to help address the budgetary challenges presented by the pandemic response. Extensive work was undertaken by Conservation Authority staff to prepare a new set of operating procedures and education programs in anticipation of the gradual reopening of the province.

Under the careful scrutiny of our local Public Health Unit, the Conservation Authority's Ontario-certified teachers developed and taught an exciting yet socially-distanced 7-week summer camp program to a cohort of 8 school aged children. In the fall, and in response to the need of local parents to return to work, the Conservation Authority opened the Nature Nuts School at the Millennium Conservation Area. In addition to dedicated outdoor experiential learning programs, the Nature Nuts School provides technical and educational expertise to support elementary students completing their schooling through their School Board's online learning program. The Conservation Authority's teachers also took the education program on the road by teaching in the yards of numerous local schools. These programs primarily consisted of unique certification programs that are requisite to the secondary student's completion of their Specialist High Skills Major (SHSM) seal. In spite of the challenges presented by 2020, the GFC strived to give students of all ages the life-long gift of nature by experiencing meaningful, hands-on learning in the outdoors.

Normally, when students are not in residence, the Ganaraska Forest Centre is transformed into a unique and romantic DIY

wedding venue, where magical outdoor ceremonies take place in Maple Valley, and family and friends dance the night away in the stunning Great Hall. Prior to Covid-19, the GFC was fully booked for weddings and other non-profit weekend groups. Before restrictions were put into place, eight groups proceeded with their weekend adventures at the GFC and two couples were fortunate to exchange their vows, while all other bookings were pushed to 2021. Later in the year, the GRCA developed small pop-up style weddings, allowing six couples to wed in the company of their closest loved ones.

GANARASKA FOREST RECREATION

2020 was a challenging year for recreational use in the Ganaraska Forest. Due to Covid-19 restrictions, the Ganaraska Forest remained closed to all public use for several months. In response, the GRCA extended forest membership expiry dates to reflect the forest closure. With the forest re-opening, there was an influx of forest users and this trend continued throughout the year. Covid-19 restrictions forced GRCA to operate with reduced numbers of staff which proved to be a challenge with the increased number of forest users. Forest user compliance has been an ongoing issue for the GRCA and has caused great concern amongst user groups. As concerned community neighbours, Universal Protection Agency (UPA) offered to provide the GRCA with volunteer security services to help offset the reduced staff and volunteer personnel. The GRCA accepted UPA's offer and the Board of Directors designated several UPA staff as Provincial Offences Officers. Starting in late summer 2020, UPA worked directly with GRCA Provincial Offences Officers during Forest Patrols. This partnership was very successful and GRCA is hoping to continue working with UPA in 2021.

To address environmental degradation and ongoing non-

compliance, GRCA upgraded restrictions at Thorpe Hill and Lookout Hill, both of which are located within the West Forest. These environmentally sensitive areas are now off limits to the public and No Trespassing signage is in place. The GRCA hopes these restrictions will slow erosion until restoration efforts can proceed. Additionally, due to the loss of the International Mountain Biking Association “Epic Trail” designation, the GRCA removed the Paul’s Dirty Enduro trail from all GRCA publications in 2020. To address the Epic Trail designation loss, the GRCA has developed partnerships with the Peterborough Trail Builders Association and Ganaraska Forest Horse Club to re-develop a single-track trail loop system. GRCA expects this trail creation project to extend over several years.



GANARASKA FOREST MANAGEMENT

In order to continue sustainable management of the

Ganaraska Forest, four timber harvest contracts were awarded in 2020. Robert Ritchie Forest Products completed two contracts for the thinning of 65ha of Red and White Pine plantations. Harvest inspections were carried out on a weekly basis to ensure that the conditions and guidelines of the harvest contracts were honoured and that logging damage was minimized. The remaining GAN03-20 and GAN04-20 harvests were not completed and will be carried over for completion in 2021.

Approximately 215ha of Red Pine plantations in the Central and East Forest has been scheduled and marked for thinning in 2021. These areas will be completed in addition to the outstanding 2020 tenders.

Thanks to the generous support of the OPG Regional Biodiversity Program, the GRCA also completed two underplanting projects in the Ganaraska Forest and a first thinning of two small plantations in Millennium Conservation Area. Each project was designed to jump start the regeneration process in the plantations; one via an increase of understory light levels and the others through the planting of 11,000 White Pine and 1,800 Red Oak saplings.

2020 also brought a severe outbreak of Gypsy Moth across southern Ontario, with the eastern portions of the Ganaraska Forest experiencing extreme impacts in particular. Most of the oak in these parts of the forest were completely defoliated from the heavy feeding activity of the moths. Although most trees were able to flush a new crop of leaves, a significant amount of fresh egg masses were observed in the Forest. To mitigate the impacts of consecutive years of defoliation, the GRCA will be exploring opportunities for an aerial spray in the spring of 2021.

No other significant outbreaks of insect or disease were noted,

save for the Forest's normal challenges with persistent issues of Red Pine decline, White Pine blister rust and weevil, and terrestrial invasive species such as Dog-strangling Vine. Monitoring of these and future threats continues to be an important focal point of the Forest's management.



FINANCIAL SUMMARY

2020 was a very challenging year for everyone and the GRCA was no exception. COVID-19 led to the cancellation of most of the outdoor education programs, as well as the cancellation/postponement of the majority of weddings to be held at the Ganaraska Forest Centre. This resulted in a drop in revenue of approximately \$600,000.00. The 2020 preliminary budget had to be reworked and many program areas were affected. The 2020 budget totaled \$3,577,308.00 and it forecasted a \$33,372.00 deficit. Nevertheless, the financial statements show a small surplus as a result of good fiscal

management. The municipal general levy was increased by 2.5% and was adjusted in accordance with the current value assessment figures. The general levy for 2020 was \$1,161,813.00 which represents about 33% of the total budgeted revenues.

To deal with the significant impact on the GRCA's financial position many staff were placed on temporary layoff or shortened work weeks. Two staff were permanently laid off and a position which was recently left vacant was not filled. A delay in the timber tender process also resulted in a significant revenue shortfall which had to be absorbed in the 2020 budget. The GRCA continues to partner with others on important initiatives. As well, the source protection planning program continued which continues to be fully funded by the Province.

The chart beside shows the actual revenues for 2020. The levy shown is a combined total of general and benefiting levy. The Ganaraska Forest timber sales of \$135,908.00 and memberships of \$382,803.00, as well as the revenues from Treetop Trekking of \$38,794.00 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 \$88,811.00 for the Trent Conservation Coalition Source Water Protection initiative.



2020 GRCA STAFF, BOARD OF DIRECTORS, SUMMER STUDENTS

Corporate Services

- Linda Laliberte, CAO/Secretary-Treasurer
- Alyssa Butters, GIS Technician
- Amy Griffiths, Marketing & Communications Officer
- George Elgear, General Superintendent
- Ian Jeffrey, GIS/Remote Sensing Specialist
- Jeff Moxley, GIS Coordinator
- Julie Verge, Corporate Services Assistant
- Kim Baldini, Finance Clerk
- Kody Beattie, Programmer Analyst
- Michelle Giddings, Bookkeeper

Watershed Services

- Cory Harris, Watershed Services Coordinator
- Leslie Benson, Watershed Engineer
- Jessica Mueller, Watershed Hydrogeologist
- Joanne May, Administrative Assistant, Planning and Regulations
- Ken Thajer, Planning and Regulations Coordinator
- Lindsay Champagne, Watershed Biologist
- Mike Smith, Water Resource Technician
- Nadeem Paracha, Water Resource Engineer (until May 2020)
- Pam Lancaster, Stewardship Technician

Ganaraska Forest Centre/Ganaraska Forest

- Linda Givelas, GFC Property Manager (until February 2020)
- Aaron Staples, Outdoor Education Instructor
- Ed Van Osch, Forest Recreation Technician
- Gus Saurer, Forester
- Megan Hennessy, Outdoor Education Instructor (until May 2020)
- Paige Hannah, Gatehouse Attendant (until March 2020)
- Roy (Andy) Foster, Weekend GFC Technician
- Ryan Goodall, Outdoor Education Instructor
- Shayne Pilgrim, GFC Technician
- Susan Milton, Gatehouse Attendant (until March 2020)
- William Lemieux, Conservation Lands Technician

Board of Directors

- Jeff Lees, Chair, Municipality of Port Hope
- Mark Lovshin, Vice Chair, Township of Hamilton
- Brian Darling, Town of Cobourg
- Greg Booth, Township of Alnwick/Haldimand
- Joe Neal, Municipality of Clarington
- Margaret Zwart, Municipality of Clarington
- Nicole Beatty, Town of Cobourg

- Tim Belch, Township of Cavan Monaghan
- Tracy Richardson, City of Kawartha Lakes
- Vicki Mink, Municipality of Port Hope

Summer Students

- Roy (Andy) Foster, Conservation/Restoration Technician
- Monica Matthews, Ganaraska Forest Centre Landscape Technician
- Rachelle Fortier, Environmental Technician
- Kelsey May, Assistant Teacher