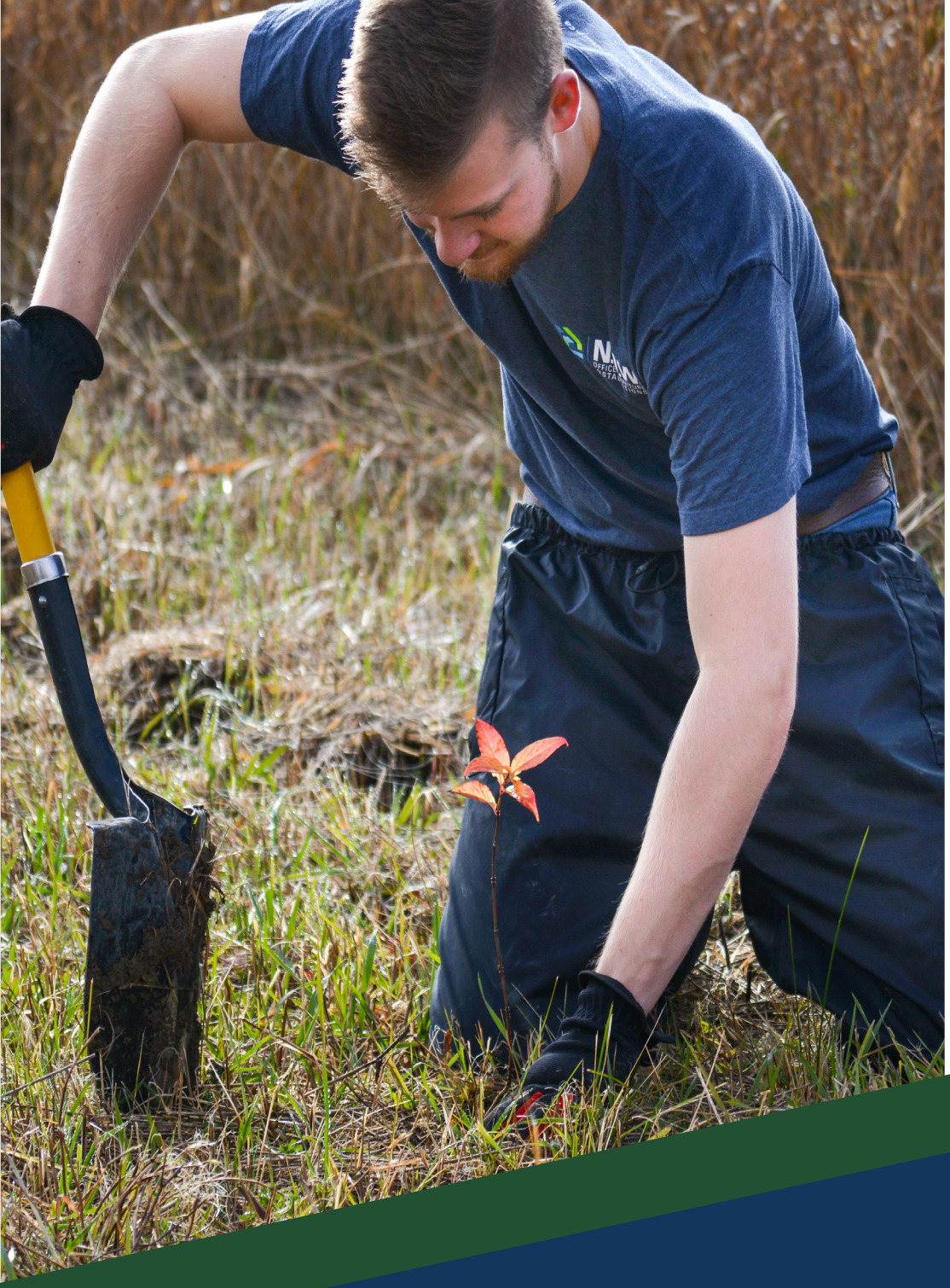
Annual Newsletter

2020 Edition

Muskrat Watershed Council



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Letter from the Chair

On behalf of the Muskrat Watershed Council (MWC), I would personally like to extend our sincerest thanks for the support we have received from our partners and members during this difficult year. There has been a lot of re-adjusting for the MWC as we transitioned to an online delivery of our meetings and scaled the hurdles of running our projects while abiding to the rules and regulations of social distancing as well as the closure of many of our key business, institutional, and organizational partners. Like so many other charities and not-for-profits in our local community and across the nation, we have faced many new and unexpected challenges this year resulting from the COVID-19 pandemic. With these challenges came difficult decisions, such as postponing several projects until 2021. These include our Water Quality Monitoring Network, our Zeolite Project, our Soil Sampling Project and our Cottage Succession Seminar with the Federation of Ontario Cottagers' Association (FOCA). Nevertheless, through it all we remain dedicated to continuing our endeavours to better comprehend and seek out solutions to our regional water quality issues.

Despite the challenges, we have been fortunate enough to host events before COVID-19 and adapt certain project deliveries so that they may continue or begin as planned this year. We were lucky enough to meet face-to-face with fellow lake associations this past fall at the Annual Lake Association Meeting ("Where the Waters Meet"). Watersheds Canada's Natural Edge Program in the Muskrat Watershed is entering into its third and final year of operation ("Natural Edge, a Perfect Fit for Farmers"). We were also able to continue our efforts to clean up Cobden Beach by installing weed mats in July ("Tackling Weed Control at Cobden Beach"). New projects this year included a partnership with Algonquin College and several cottage owners on Muskrat lake to launch a Microcystin Sampling Pilot Project ("Microcystin Sampling on Muskrat Lake"). Accessing funding in the upcoming year(s) will no doubt be more difficult with so many grants and funding streams being redirected toward supporting COVID-19 demands. The MWC understands the justification and need for these funds given the current global crisis; however, the water quality issues seen in our watershed as a result of climate change and nutrient loading still remain. The MWC will remain committed to seeking funding opportunities and adapting to the new normal.

Healthy water is essential to us all. As with other difficult times faced by humans throughout our collective history, our community, though small, has always been dedicated to supporting local initiatives and seeking solutions that support a better, brighter future. We have and always will, see the value in community – in supporting and working together as neighbours, family, and friends – especially in challenging times such as these. Something as simple as making a one-time donation, volunteering your time or renewing/purchasing a membership can go a long way in sustaining local charitable organizations, such as the MWC, as we work together toward a better, brighter future.

Please be safe and have a great rest of your summer,

Sincerely,

Karen Coulas

Chair of the Muskrat Watershed Council

Volunteer Spotlight

> **“The lake has been a big part of my life. I just want to keep maintaining it for the future. If we don’t protect it, there is no future for it.”**

Back in 2014, when the first meeting was held at Cobden Public School to do something about the deterioration of water quality in Muskrat Lake, Andy Laird knew he had to be there.

“I’ve been on the lake all my life. I keep an eye on it and I knew the lake had changed over my lifetime. I was concerned and I wanted to make sure it got better and not worse,” he says.

Andy grew up in Renfrew but spent summers at his grandparents’ lakefront home on McFarlane Road. His grandfather was the owner of the local newspaper, The Cobden Sun. He and Andy’s grandmother rented out cabins to summer visitors at their Bayview property. Back then, there was even a Bayview dance hall.

These days, Andy lives on that property full-time. He has a large work-shop where he does fine woodworking, among many other projects. He’s been described as a jack of all trades. “Pick any trade in the construction industry - I can do almost any trade,” he says.

This versatility has been a great help to the Muskrat Watershed Council (MWC), the environmental group that grew out of that first meeting. Although Andy’s official title is Director of Tourism and Recreation, he’s been involved in nearly every aspect of the organization’s work.

As well as attending monthly meetings, Andy has been involved with the science committee and with the collection of water quality data each spring, summer and fall. He has shown visitors from Holland Marsh around the lake, in preparation for a presentation on water filtration they made to the MWC. He has worked with Algonquin College to do a lake-wide mapping survey, involving aerial photos and GPS-based water data gathering. He maintains and runs the aeration system at Cobden Beach. And his latest project is installing weed mats at the beach this summer.

“I’m sort of the supplier, requisition and transportation guy,” he said.

Andy also sets up and takes down the tent and displays for the MWC booth at community events like Taste of the Valley, the Plowing Match and the Cobden Fair. Then he drags all the equipment, displays and boxes home to store them until the next event. He has even built and donated children’s wooden prizes to help raise money.

Over the years, Andy’s friendly personality and many practical skills have been huge assets to the MWC. He seems to know everything and everyone.

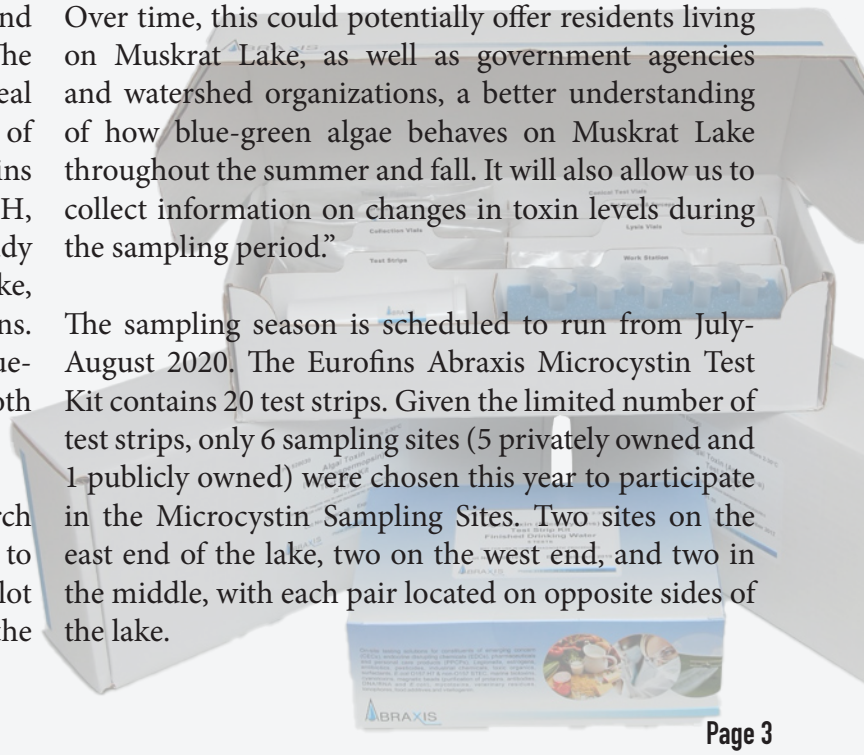
Andy has been an enthusiastic and dedicated volunteer with the MWC since the very beginning. And he plans to continue.

Microcystin Sampling on Muskrat Lake

In summer 2018, the Muskrat Watershed Council received an email about a blue-green algae study out of the University of Montreal. The University of Montreal invited lake associations and/or watershed organizations throughout Canada to participate in a collection program that involved collecting blue-green algae samples during a bloom. On September 19, 2018 representatives from the Muskrat Watershed Council and Algonquin College's Office of Applied Research in Pembroke, Ontario collected algae samples from the Muskrat Lake Boat Launch in Cobden, Ontario, using a sampling kit and protocol provided by the University of Montreal. The samples were returned to the University of Montreal for analysis. The lab analysis included testing levels of cyanobacteria (blue-green algae), potential cyanotoxins within the cyanobacteria, phosphorus, nitrogen, pH, alkalinity, and total hardness. Results from the study revealed the presence of cyanotoxins in Muskrat Lake, the most common of these toxins being microcystins. Microcystins are a strain of toxin produced by blue-green algae blooms that can cause liver damage in both animals and humans.

These results spurred the Office of Applied Research to partner with the Muskrat Watershed Council to launch a Summer 2020 Microcystin Sampling Pilot Project on Muskrat Lake. The pilot project will test the effectiveness and usability of the Abraxis Microcystin Test Kit (purchased by Algonquin College) for potential future use in a citizen science test kit sampling program. In a recent interview with Julie Sylvestre, the Managing Director of the Office of Applied Research at the Pembroke Campus, she stated that "If the kit proves user-friendly and accurate at detecting levels of microcystins present in blue-green algae blooms, we hope to develop a more robust sampling plan that could provide information on blue-green algae bloom frequency and distribution over a determined period. Over time, this could potentially offer residents living on Muskrat Lake, as well as government agencies and watershed organizations, a better understanding of how blue-green algae behaves on Muskrat Lake throughout the summer and fall. It will also allow us to collect information on changes in toxin levels during the sampling period."

The sampling season is scheduled to run from July-August 2020. The Eurofins Abraxis Microcystin Test Kit contains 20 test strips. Given the limited number of test strips, only 6 sampling sites (5 privately owned and 1 publicly owned) were chosen this year to participate in the Microcystin Sampling Sites. Two sites on the east end of the lake, two on the west end, and two in the middle, with each pair located on opposite sides of the lake.



Natural Edge

A Perfect Fit for Local Farmers

Article written and provided by Watersheds Canada

Watersheds Canada, the Muskrat Watershed Council and Algonquin College's Waterfront Campus completed the second year of their joint Muskrat Watershed Rehabilitation Project. The project sees to plant a total of 45,000 native trees and shrubs along agricultural shorelines over 3 years. To date, 30,000 native plants have been planted in the watershed. The project uses Watersheds Canada's Natural Edge Program to design and implement the planting. Participating landowners received a free site visit to discuss the current state and goals of their shoreline and then site parameters were measured. Using the Natural Edge App, a planting plan was created which outlined the planting compartments, the native species chosen to be planted, the financial breakdown, and the Landowner Stewardship Agreement. With generous funding from the Ontario Trillium Foundation, LUSH Canada, Whitewater Brewing Company, and M&R Feeds and Farm Supply, the program was completely free to the landowners.

In 2019, a total of six sites in the Muskrat watershed saw 3814 meters of shoreline naturalized using 15,000 native trees and shrubs. One agricultural property owner that took advantage of the program was Stephen Edwards. "We were already thinking about planting trees on the site. When we heard about the Natural Edge program, it was a perfect fit for us", said Edwards. Adding, "Almost 10,000 trees and shrubs were planted on our two properties. We thank all the volunteers who helped plant the species which will help the water quality".

A driving force of the project is working with local community groups to locate planting sites and carry-out the project to reach our shared goals of a healthy environment and clean water preservation. "It has been so great to work with Watersheds Canada and Algonquin College on this project. Hats off to the farmers who let us take over their land and plant. The agricultural community on a whole has been greatly supportive, and as a farmer myself this makes me so proud", said Karen Coulas, Muskrat Watershed Council Chair and Co-Director of Agriculture.

Students from Algonquin College also played a role in protecting the watershed, helping on planting days and collecting water quality data. "Watersheds Canada has devoted considerable time and resources to these planting initiatives in our community. As part of the Natural Edge Program, students at Algonquin College have received hands-on learning through water sampling, stream bank assessments, and stream bank naturalization in the Muskrat Watershed", said Julie Sylvestre, Algonquin College's Managing Director of Applied Research, Innovation, and Entrepreneurship. "Most importantly, students are provided with the opportunity to be change-makers in their community through projects that demonstrate a real benefit to the local environment", Sylvestre adds.

This project provided students, volunteers, and farmers the opportunity to learn about the benefits of a natural shoreline and why they are so important. Native trees and shrubs were planted to improve

water quality by filtering out excess nutrients and toxins before entering the waterway, as well as to help stabilize shoreline banks and create vital wildlife habitat.

The Natural Edge Program would not have been a success in the Muskrat watershed without the Muskrat Watershed Council, Algonquin College's Waterfront Campus, the landowners who took part in the program, and the volunteers who helped plant. "We had a very successful second year of our project and it was great working with our partners, the farmers, and all the volunteers who helped us plant. The positive impact we've made in the Muskrat watershed will be felt for years to come and I look forward to continuing in 2020 with our final year of the project", said Chloe Lajoie, Natural Edge Program Manager, Watersheds Canada. 2019 program funding was generously provided by the Ontario Trillium Foundation, the Daniel and Susan Gottlieb Foundation, LUSH Canada, Whitewater Brewing Company, and M&R Feeds and Farm Supply.

Tackling Weed Control at Cobden Beach

In an effort to help address the issue of regular and prolonged beach closures due to bacterial contamination and blue-green algal blooms in Muskrat Lake, the Muskrat Watershed Council initiated a beach cleanup project to improve the water quality at Cobden beach so local residents and visitors can once again use the beach for swimming and other activities.

In 2017, the Muskrat Watershed Council (in partnership with Whitewater Township) installed an aeration and biological enzyme treatment system at Cobden Beach. Since installation, Cobden Beach has remained open to the public for most of the summer season. Though the aeration system helps to reduce bacterial contamination at Cobden Beach it does not address the issue of excessive aquatic vegetation that is often seen growing there by mid-summer.

In 2019, the Muskrat Watershed Council purchased two Weed Screening Kits from Weeds-B-Gone in Cobourg, Ontario. The kits were installed at Cobden Beach on July 4, 2020, each kit consisting of 3-8x28ft screened fabric mats. Volunteers from the Muskrat Watershed Council filled a series of sandbags that attached to the bottom of the mats and acted as an anchor, helping the mats sink to the bottom of the beach when installed and ensuring the mats remain in place afterwards.

Water Quality Monitoring Network **Postponed for 2020**

Since 2014, the Muskrat Watershed Council has partnered with Algonquin College's Office of Applied Research and the Environmental Technician Program to collect monthly water quality and quantity samples at pre-selected sites within the Watershed from May-August. After the water is collected (sampled), the samples are shipped to the Ontario Ministry of Environment, Conservation and Parks (OMECP) to be analyzed at their accredited lab. Given the current situation with COVID-19, it was agreed upon between the Muskrat Watershed Council, the Office of Applied Research and the OMECP that the sampling of the Water Quality Monitoring Network in the Muskrat Watershed would be postponed until 2021.

Where the Waters Meet

Photo Taken by Ottawa River Keeper

On September 21, 2019, the Muskrat Watershed Council (MWC) hosted the annual Interlake Association Meeting at the Bromley Community Centre on the Barr Line in Douglas, Ontario. The morning gathering brought together lake association representatives from Carson/Trent/Lepine/Greenan Lakes, Golden Lake, Round Lake, Aylen Lake, Olmstead/Jeffery Lakes, Lake Clear and Lake Dore. The purpose of the Interlake Association Meeting is to share knowledge, experiences, struggles and ideas between different lake associations in Renfrew County. These meetings have been happening for several years and are hosted by a different lake association each year. Representatives from each lake association spoke about their projects, their fundraising style (what worked and what did not) and their concerns for their lake.

Some projects discussed at the meeting were Love Your Lake, the Natural Edge Program, Adopt a Road, water quality testing, and a lakefront property fire pump system.

Love Your Lake is a shoreline evaluation program developed in 2013 by Watersheds Canada and the Canadian Wildlife Federation. It operates through partnerships with local lake associations or watershed organizations to assess the shoreline health of a lake. Trained volunteers work alongside Love Your Lake staff to perform an assessment of each shoreline property on a lake. Once this process is complete, landowners receive a private, personalized property report. This report covers the results of the assessment and provides recommendations/suggestions on how a shoreline could be improved to benefit the water quality of the lake, the available habitat for fish and wildlife and the continued enjoyment of the landowner. The lake association or water organization also receives a summary report about the lake's overall shoreline health, with no identifying details about individual properties.

The Natural Edge Program is a shoreline naturalization program also run by Watersheds Canada. It aims to help cottage owners return their shorelines to a more

natural state by planting native species of trees, shrubs, wildflowers and grasses along the water's edge. This is turn improves the lake's water quality by reducing run-off and shoreline erosion while creating new habitat for wildlife. Like Love Your Lake, the Natural Edge Program works through local partnerships with lake associations or environmental organizations. The Natural Edge team visits a waterfront site and works with the property owner to create a custom planting plan suited to the shoreline and the preferences of the landowner. Plants go in the ground either in the early spring or, more commonly, the late fall.

The County of Renfrew has an Adopt-A-Road Program for our county road system. It is a way for volunteers to take part and help make the County of Renfrew a cleaner and more beautiful place to live. The Adopt-A-Road Program helps keep our spaces green and our environment clean. Some lake associations take part to help their areas and as a volunteer outreach. Aylen Lake Association spoke on using some of their 2019 fundraising money to purchase fire pumps that were put in locations around their lake. One of these pumps helped stop a fire on a property while protecting the surrounding properties.

Suggested and discussed successful fundraising techniques were membership drives, regattas, fish fries, and pancake breakfasts. Gaining the support of local business communities was also discussed.

Associations presented on varying forms and degrees of water quality data collection in/on the Muskrat Watershed, Carson Lake, Golden Lake, Alyen Lake, Olmstead/Jeffery Lake, Lake Clear, Lake Dore and the Bonnechere River.

Concerns raised included how to partner with townships and how to deal with issues like flooding, shoreline erosion, seagulls and zebra mussels. The challenges of keeping lake associations funded and keeping lakes healthy were also discussed.

John Brady from the Renfrew County Stewardship Council spoke about One County, One Voice, an initiative to create an organization that all water associations in Renfrew County can turn to address growing concerns over the preservation of our local freshwater resources.

Soil & Water

In the summer of 2019, the Muskrat Watershed Council partnered with Renfrew County Soil and Crop, M&R Feeds and Farm Supply and local farmers to launch a soil sampling project within the Muskrat Watershed. Over the course of fall 2019, volunteers from the Muskrat Watershed Council sampled over 15 agricultural fields. Samples were analyzed through M&R Feeds and Farm Supply and a full soil report was returned to farmers. The information contained within the report as well as a local workshop held by the Ontario Ministry of Agriculture and Rural Affairs in February 2020 provided project participants with a better understanding of the soil health on their field(s). Knowing the current state of their soil health helps to prevent the possible overuse of soil amendments, such as fertilizer. This saves the farmer money and time as well as reduces the amount of excess nutrients washing off from farmer's field into our lakes and rivers. Due to restrictions relating to COVID-19, this year's soil sampling project has been postponed to 2021.

Contact Us

If you are interested in knowing more about what we are doing in the local community, or wish to volunteer your time, our regular monthly meetings happen every third Thursday of the month at 6:30pm. All are welcome!

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