

2015 Water Quality Monitoring



Students checking automated samplers (June 26, 2015)

Again this year, MWC has partnered with Algonquin College's Environmental Technician Program to carry out water quality monitoring. Gathering annual data will help identify trends and monitor changing conditions. The Ministry of Environment and Climate Change (MOECC) has provided analytical support valued at \$41,000 to test 140 water samples and provide training. Algonquin received funding from a number of sources, including the Cobden Civitan Club, Deep River Science Academy and WAMQI for the 2015 monitoring program. Program Coordinator Sarah Hall

and her team identified 23 sampling sites in late April. Bi-weekly sampling will continue through October. Other activities include monitoring effectiveness of the Biocord raft installed at Pine Valley for reducing phosphorus and investigating the extent and timing of low oxygen levels in areas of Muskrat Lake.

Analysis of 2014 Monitoring Data & Land Use

Watershed monitoring through sampling and other measures provides vast amounts of data. Using this data to make informed decisions for the watershed is essential. MWC recently recruited Dr. Rebecca Dalton, an expert in the ecotoxicology of aquatic ecosystems. Her research has focused on assessing the effects of fertilizers and herbicides on plant and algae communities in river systems, particularly the effects of excess nutrients on water quality and ecosystem health. Thanks to funding from the Cobden Civitan Club, Dr. Dalton has produced a report analyzing the 2014 monitoring data of our watershed. With mapping support from the MOECC, Dr. Dalton looked at land use in relation to the water quality data. This new analysis suggests that several beneficial management practices, controlled tile drainage in particular, may be effective in reducing nutrient loads and improving water quality. *Dr. Dalton will present her report at the MWC Annual General Meeting on Aug. 8, 2015.*

A Year of Growth for MWC

Volunteers and supporters have been working hard over the last year to continue building MWC. As a new organization, each step forward is important and requires the dedicated effort of volunteers. Two community Science Nights were an opportunity to bring expert speakers and engage in discussion with the community. Victor Castro of the Ministry of Environment and Climate Change gave an overview of phosphorus for our watershed. Sid Vander Veen of the Ontario Ministry of Agriculture, Food and Rural Affairs spoke about agricultural drainage. And Sarah Hall of Algonquin College discussed the 2014 Water Adaptation and Management Quality Initiative (WAMQI). This spring, MWC had the opportunity to meet with each municipality in the watershed, including Admaston/Bromley, Whitewater Region, City of Pembroke, Laurentian Valley and North-Algona-Wilberforce. These events and meetings helped to share information and continue to build a network of support for action in our watershed that best represents all interests for our region.

Volunteers from MWC had the opportunity to participate in the Living Waters Rally and the 2014 Latornell Symposium. Thanks to funding from MNR and Algonquin College, participation in this symposium provided important exposure for MWC within a network of environment, agriculture, watershed and funding stakeholders. Learning from other watersheds sharing similar challenges is vital for progress.

Funding Announced for Cobden's Wastewater Treatment Plant

On June 29th, the Canada-Ontario Small Communities Fund announced environmental funding for a new wastewater treatment plant in Cobden. This \$9.4 million project will see costs shared equally between Whitewater Region, Province of Ontario and Government of Canada. This is a significant step forward to replace the aging plant, increase treatment capacity and support reduction of phosphorus loading to Muskrat Lake.

MWC's 1st Canada Day Watershed Celebration!

June 30th brought learning and fun to the Cobden waterfront with MWC's first Canada Day watershed celebration. With the Cobden Activities Association presenting the fireworks each year, MWC was able to join forces to have some fun throughout the day and share more information about our watershed. The kids' area and bouncy castle were popular for the younger ones with approximately 75 kids participating in the "big dig" on the beach.

Other activities included watershed learning with the MWC Science Committee and Algonquin College Mobile Field Lab, a poker run, music in the park, the Cobden Civitan BBQ, a rescue demonstration by the Cobden Fire Department and information from the OPP Marine Unit. All together this made for a fun family afternoon and opportunity to share knowledge and concerns for the watershed. Our 50/50 winner was Sandy Dick. Sia, Ben and Rachel each won a jar of candies for guessing just about the right number of gummy worms, fish & frogs! Many thanks to each and every one who joined us and made the day possible – we couldn't have done it without you. *Would you like to be a sponsor for Canada Day 2016? Please contact MWC to get involved for next year!*



MPP John Yakabuski joined us and added his handprint to the We Love Our Lake banner in the kid's activity area (June 30, 2015).

Watershed Funding Needs

One of the biggest challenges in moving forward for water quality improvements in our watershed comes down to dollars and cents. Over the last year, MWC has applied to a number of grants from large granting foundations like Ontario Trillium Foundation, Loblaw Water Fund, Mountain Equipment Co-op Community Grants program and Environment Canada Environmental Damages Fund. We have yet to secure sustainable funding. There is strong competition across the province and the country for limited resources and it is a challenge to build a name for our region as a new organization. As a community, we need to raise awareness of our watershed with all levels of government and key water quality stakeholders.

As well as continuing to work on grant proposals, MWC is reaching out to businesses and individuals interested in supporting our efforts through local donation jars, sponsorships and MWC memberships which cost \$20 per person, per year.

We gratefully acknowledge the generous financial and in-kind support from:

Cobden and District Civitan Club • Ontario Ministry of Environment and Climate Change • Ontario Ministry of Natural Resources and Forestry • Algonquin College • Township of Laurentian Valley • Township of Whitewater Region • City of Pembroke • Renfrew County • Cobden Activities Association • East Side Mario's Pembroke • Valley Truck & Spring • Irving Big Stop • 17 West Shell • Dan's Pizza • Lakeview Deli • George's Marine • Wilderness Tours • Dick Plummer Marine • Oaks of Cobden • Country Kitchen • Forgie's Concrete • CPG Excavating • Rooney Enterprises • Plan Group • Whitewater Brewing Co. • G & S Farm Equipment • Huckabone's Kubota • Spurrell's Auto Body • Cobden Auto Supply • MacEwen Fuels Pembroke • Valleyview Golf • Sears • Candlewick Gifts • Sugar & Spice • Millar Feed & Seed • Ottawa Sports and Entertainment Group • Conway's Drug Store • Dragonfly Golf • Ry-J's Climbing Adventures • Dr. Steve Olsen, Chiropractor • E.A. Ted Barron Realty & Insurance • ...and all the many contributions of our volunteers

Thank You!

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MWC Headlines

Indicators of Watershed Health

MWC is fortunate to have the expertise of Sarah Hall, Coordinator of the Algonquin College Environmental Technician Program, on our Science Committee. Sarah recently completed her Master's degree from Royal Roads University. Her research focused on Ecologically Relevant Eutrophication Indicators for the Muskrat Lake Watershed. An indicator serves as observable and measurable event or state that provides evidence of certain conditions. Through Sarah's research, the top six indicators for the Muskrat Watershed were identified: (1) Beach Closures (2) Water Quality Index (3) Phosphorus Concentration in Streams and Lakes (4) In-lake dissolved oxygen levels (5) Water Clarity and (6) Sewage Treatment Plant Bypass Events. These indicators are being adopted by MWC as our primary measures of conditions in the watershed.

Shoreline Buffers for Watershed Health

A healthy shoreline provides a number of benefits for the landscape and nearby water body. Vegetated shoreline buffers help prevent erosion and limit the phosphorus loading associated with this erosion. They help filter sediments and, with mature streamside trees, provide shade to effectively cool water temperatures, which is beneficial for healthy fish communities.

In the fall of 2014, Environmental Technician students worked in partnership with farm owner Les Hill to evaluate the riparian zone of his property bordering Muskrat Lake. This provides a model site from which other shoreline assessments can be done and lessons can be learned about native versus non-native vegetation.

The MWC Agriculture Committee has been working together with landowners in our watershed to promote locally-grown practices. A donation of seed was received from SynAgri this spring to plant a shoreline buffer on Ed Egan's farm. This type of collaboration within the agricultural community of our region is ideal for developing local practices that support watershed health.

Looking Ahead...

Momentum continues to grow for addressing the challenges of Muskrat Lake and our watershed as a whole. MWC remains committed to finding sustainable ways forward to take action for our watershed. This will include more community outreach with Science Nights and information, strengthening expert partnerships for projects and continuing to seek ways to leverage community action for our watershed.

To make this happen, it is essential that MWC secure funding sources to meet our critical funding needs. We will continue to explore funding grants, to seek partnerships within the watershed management community and to collaborate within our community to develop projects that can bring sustainable results.

There is much to be done and the work of committed volunteers is essential. At our Annual General Meeting on August 8, 2015, elections will be held for key executive positions on the 2015/16 Council. These include Chair, Vice-Chair, Treasurer, Secretary and the newly-established position of Director at Large. There are also additional appointed positions on council that need your expertise and interest. *If you would like to get involved, please join MWC and contribute your time and talent for the future of our watershed and our community!*



Sampling the Snake River (June 2, 2015)