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To learn more about all our students and alumni visit our website to see our advisor biographies and student projects:

<https://baxtercreekwatershed.org/our-advisors>.

Visit our website at :

<https://baxtercreekwatershed.org/>



*A glacial lake deposit “kettle pond” remnant of a ribbed or Rogen moraine in the Baxter Creek watershed.*

## 3<sup>RD</sup> ANNUAL BAXTER CREEK WATERSHED FORUM: “CULTIVATING KNOWLEDGE FOR A SUSTAINABLE FUTURE”



### Cultivating Knowledge for a Sustainable Future

The 3<sup>rd</sup> Annual Baxter Creek Watershed Forum has been scheduled for Monday, September 23, 2024 in Millbrook.

Building off the success of our first two watershed Forums, the Baxter Creek Watershed Alliance is gearing up for our third Forum scheduled for Monday, September 23<sup>rd</sup>, 2024, from 6:30 to 8:30 pm at the Millbrook Royal Canadian Legion, 9 King Street East,

Millbrook Ontario. Doors open at 6:00pm and the Forum will start at 6:30pm sharp!

We are still developing the agenda for the evening so please check our website for details closer to the date. We look forward to sharing the evening, discussing local issues, sharing information, and engaging on the theme of cultivating knowledge for a sustainable future. This theme has resonated through our board of directors over the last year as we have navigated our way through a number of changes in our organization and in the way we engage with our community as we work on our mission of conserving and enhancing the local watershed environment for future generations of humans and wildlife.

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*“I am not a biologist, an ecologist, nor indeed an ‘ologist’ of any kind. I am merely a naturalist, for whom logic and ‘the word’ have come to count for little. Nature, praise be, neither talks nor is rational, and therein is comfort.”*

*- John Livingston, renowned Canadian naturalist, broadcaster, award-winning author and professor in the Faculty of Environmental Studies, York University*

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## UPDATE ON THE TOWNSHIP OF CAVAN MONAGHAN PARKS AND RECREATION MASTER PLAN

Last year the Township undertook an initiative to create a Master Parks and Recreation plan, referred to as *Vision 2035 – Strategic Plan for Parks and Recreation*. A series of community meetings and surveys were conducted to solicit recommendations from local residents. In December the final report was presented to council, with a priority being placed both on the development of a downtown park and the remaining lands at the Cavan Monaghan Community Centre (CMCC). In February of this year Council approved a budget of 70K for phase three of this initiative. This third phase will include engaging a consultant for the development of design plans for both the remaining lands at the CMCC and the downtown park. A request for proposal (RFP) was posted on the Bids and Tenders website available at a cost of \$150. Approximately ten landscape design firms submitted proposals in advance of the RFP submission deadline of June 11<sup>th</sup>.

At the Council meeting on June 24<sup>th</sup>, staff presented their evaluation of all RFP submissions and recommended the contract be awarded to Landscape Planning Limited, who submitted the second lowest bid, coming in under 50K. Council approved this recommendation, and the contract has been awarded to Landscape Planning Limited. The deliverables will be a concept design and site plan for both the downtown park and the remaining recreational land behind the CMCC.

BCWA looks forward to a collaborative community focused approach for the development of these plans. Engaging with stakeholders will be critical to ensure these plans both meet the long-term recreational goals of our growing community, while being mindful of the environmental impacts. Of particular interest is the land parcel the downtown park will sit on as it borders Baxter Creek, is designated as a natural hazard area and is

within the regulated floodplain area. Stakeholder engagement is currently forecasted to begin in October. The final designs for these properties will be presented to Council for approval in December.

The Township currently has a survey available for the community to provide feedback/suggestions on the features that may be considered in the design of a downtown park: <https://www.cavanmonaghan.net/en/things-to-do/downtown-park.aspx>.

BCWA supports the value of open public spaces, including open recreational greenspaces with accessible trails, as vital components to the health and wellness of our community.

### **KNOWLEDGE KEEPER AND LAND BASED LEARNING COMES TO BAXTER CREEK WATERSHED**

Last year Wilma Armstrong and two other elementary teachers from Millbrook/South Cavan Public School approached BCWA to discuss biodiversity curriculum for grades K through 6. The idea was to explore ways teachers in Millbrook could bring in local watershed ecology and biodiversity concepts into the classroom with some emphasis on hands-on learning.

To help kick-start the effort BCWA engaged a recent student advisor, Scott Stebbing from Trent University, to talk to students and teachers about his Baxter Creek water quality study completed using data from the Ministry of the Environment, Conservation and Parks Provincial Water Quality Monitoring Network.

Earlier this spring, Wilma shared that she had an opportunity to bring Indigenous learning into the course curriculum before the end of the school year. She explained that the nature areas of the school, used frequently for outdoor education and biodiversity learning activities, were under pressure from constant use. She wondered if BCWA may know of an Indigenous Knowledge Keeper who may be able to come to the school and speak to the students about land-based learning.

BCWA reached out to Chief Taynar Simpson of Alderville First Nation who was the keynote speaker at the 2023 Baxter Creek Watershed fall forum. He suggested that Melody Crowe of Alderville First Nation, a local elder and Knowledge Keeper in their community, may be able to assist with speaking to the students.

BCWA connected with Elder Crowe and she graciously accepted the invitation to speak to the students at the school about Land Based Learning. She was able to connect virtually with the students and share with them how the land generously provides for us people so in turn, we should give back through caring for the land, water, plants and animals just as we would pay back a favour to a friend, neighbour, or family member. This was a powerful message on the value of reciprocity which is a pillar of Indigenous learning.

BCWA looks forward to working more closely in the years ahead with teachers from Millbrook/South Cavan Public School and our regional William Treaty First Nations to inform biodiversity curriculum through local environmental issues and Indigenous learning.

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*"You could not step twice into the same river."*

*- Heraclitus*

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## WATER CONSERVATION TIPS

In our Spring newsletter we highlighted the United Nations 2024 World Water Day theme of Water for Peace. This day is important as it aims to recognize that access to clean water is a basic human right. Billions of people currently are living without access to safe drinking water and sanitation. We are encouraged to act to support access to water for all, and something we are all able to contribute to is water conservation. Conserving water not only has financial benefits, but it also can help alleviate flooding, drought and infrastructure problems. Clean water is both a costly and limited resource as only 1% of the world's water is suitable for drinking.

In Cavan Monaghan, our municipal water source is provided by three drilled wells into a large aquifer while others outside of the settlement area rely on private wells. Fortunately, we have many options that we can consider when looking for ways to reduce our water consumption:

- ❖ Only water your lawn or gardens early in the morning, or later in the evening. When the sun is at its peak most of the water will evaporate before it reaches the root system of your plants. A good rule of thumb is the rule of 8s, water before 8am or after 8pm or within two hours of the sun rising and setting. Another interesting fact is grass is intended to go dormant during periods of drought, and there is no benefit to watering grass other than aesthetic preference (outside of newly sodded lawns).
- ❖ If you do need to water your lawn just 15 minutes is sufficient, overwatering increases runoff into storm water catchment. Alternatively consider purchasing a timer for your faucet which can help limit water usage.
- ❖ Consider adding low flow faucets and shower heads to heavily used sinks & showers. These can help reduce the amount of water used by traditional shower heads by 75%
- ❖ Upgrading toilets can reduce your water consumption by 75% as older toilets can use up to 26L per flush. Look for toilets that use less than 6L per flush.
- ❖ Consider taking shorter showers and save baths for occasional use. Having a 10-minute shower can use approximately 21 gallons or 80L of water, cutting your shower by 2 minutes results in savings hundreds in water costs and water heating! During periods of drought or high heat consider taking a “Navy” shower – turning the water off while soaping up or washing your hair.
- ❖ Consider using rain barrels to catch rain collected from your home's downspouts. This water is great to use for watering flowers, crops or even washing your car.
- ❖ Consider adding a rain garden filled with native plants in place of grass. Rain gardens reduce water runoff that would normally end up in storm water catchment. Rain gardens filter pollutants out of water runoff, provide space for pollinators and can minimize flooding on your property.
- ❖ If you require water during power outages or want to supplement water use there is an artesian spring located at the entrance to Station Trail in Millbrook that can be used for nondrinking purposes. This water is not treated or tested regularly, and the Township does not assume the quality of water from this spring.
- ❖ Watch for news from the Township of Cavan Monaghan for more information and solutions to help conserve water at home.

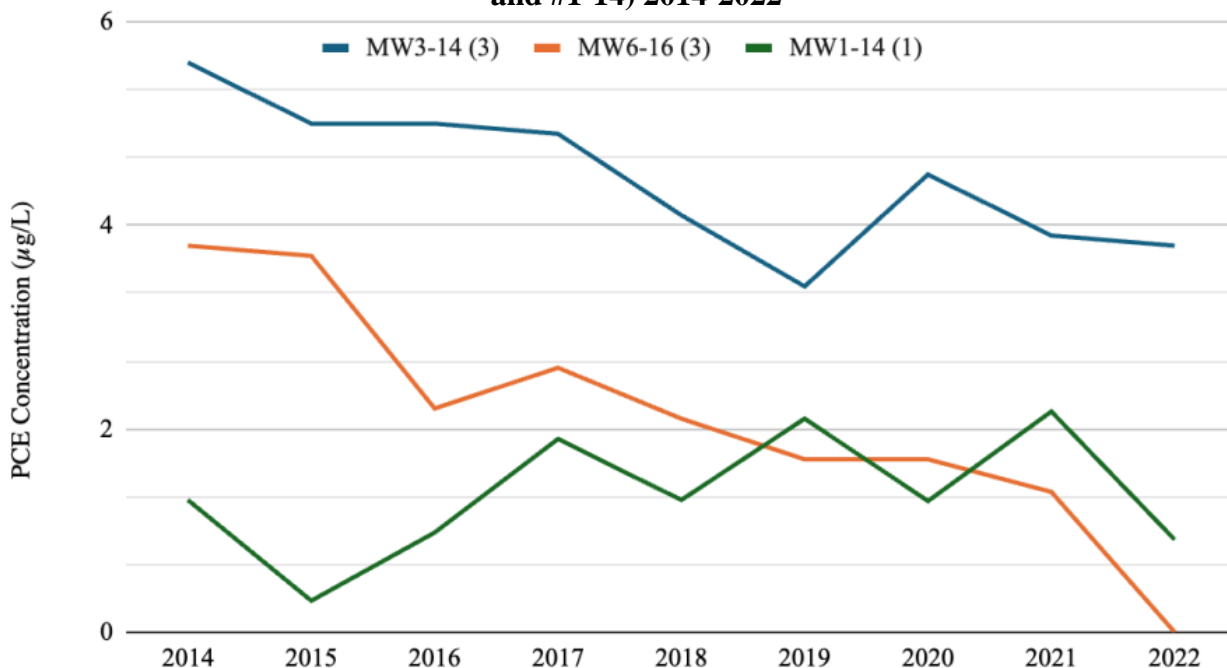
## BAXTER CREEK STUDENT PROJECT UPDATES

The last year has been remarkable with 12 post-secondary or post-graduate students collaborating with Baxter Creek Watershed Alliance in various aspects of research related to our strategic objectives and initiatives. That comes to a total of 19 students who have completed their academic learning requirements through collaborative projects with BCWA since we initiated our work in 2021.

One of the projects that received the most attention and we look to continue, was the work of Keyana Kamps from Trent University, Department of Forensic Science, for her Groundwater Review of Former Millbrook Jail Lands and Watershed Baxter Creek Watershed Alliance. As mentioned in our last issue, Keyana received the \$500 Provost Award at the Trent Celebration of Community-based Research for academic achievement. This was awarded to the project that best demonstrates rigorous community-based research practices to produce results of particularly high academic merit. We are currently working through a final review of the report which we plan to release openly through our website's [Watershed Library](https://baxtercreekwatershed.org/watershed-library) (<https://baxtercreekwatershed.org/watershed-library>).

As can be observed from the PCE concentration graph from Keyana's report below, PCE concentrations at the Monitoring Wells (MW) on the site are trending downwards. This is consistent with the reporting, that the contamination is trending in a downwards direction and is not considered a threat to the drinking water in Millbrook. It should be noted that the Monitoring Wells at the site are not used to supply drinking water to the community are not connected to the wells supplying the Millbrook Drinking Water System.

**PCE Concentration (microgram per litre ( $\mu\text{g/L}$ )) at Monitoring Wells (MW) #3-14, #6-16, and #1-14) 2014-2022**



*PCE concentrations from the lower aquifer referred to as “layer three”, observed at three monitoring wells over sampling events from 2014-2022. “Layer three” is the lower aquifer from where Millbrook draws water to supply residents with drinking water. Hydro-geologists also refer to the lower aquifer as the “Inter-Newmarket Sediment Aquifer”.*

In review, Keyana completed a series of interviews of former employees of the Millbrook Correctional Centre (MCC) to document the range of activities at the former institution which may have contributed to the contamination at the site. Through a Freedom of Information (FOI) request to Infrastructure Ontario, Keyana was provided copies of five environmental reports formerly not on the public record, for a total of 1,250 pages of information related to the decommissioning of the former MCC. Keyana also received a Records Release of 142 pages through a FOI request to the Ministry of the Environment, Conservation and Parks. The Records Release contains a wide range of background information related to property site assessments, site sampling, vulnerability analysis, geologic modelling, and other environmental information. So, in total, 1,392 pages of information that was formerly not readily accessible.

Millbrook's municipal water supply is also regularly tested at the Millbrook well system and meets the requirements of Regulation 169/03 *Ontario Drinking Water Quality Standards* of the *Safe Drinking Water Act*. This testing includes testing for PCE concentrations to fall below acceptable limits. While we know our water is safe, BCWA plans to continue research on the former MCC lands through an extension study. The purpose of future research will fall under three general themes of study:

- **Legal**
  - Assess the information received through the FOI requests and how it may inform the nature of the site condition.
  - Document any encumbrances on the property.
  - Determine potential liability issues pertaining to past contamination.
  - Consider if the contamination from the past activity is a condition of concern now or could be in the future.
- **Environmental**
  - Determine the possibility for off-site contamination or off-site conditions resulting from past activities on the property.
- **Policy**
  - Outline what future landowners of the property may need to consider in terms of site development against currently planning policies.
  - Present options for site decontamination as well as opportunities for site restoration, rehabilitation, and conservation.

## **CHANGE FOR THE OLD MILLBROOK JAIL LANDS ASSOCIATION**

At the June 19, 2024, board meeting of the Old Millbrook Jail Lands Association (also known as OMJLA), a new direction for the OMJLA was established. Through the strategic planning process of the Board of Directors, a decision was made to absorb the objectives of OMJLA into BCWA. The objectives of OMJLA will now fall under a Common Grounds stewardship initiative of BCWA. The OMJLA will no longer exist as a separate non profit organization.

BCWA will continue to monitor the provincial surplus process of the former Millbrook Correctional Centre property (referred by many in the community simply as the “Jail Lands” or “Jail Hill”). Through this initiative, BCWA will continue to support property acquisition interests of those in the immediate and broader community either directly or indirectly. The property continues to have a range of ecological, environmental, and social values and BCWA remains committed to conserving the ecological values of the jail lands property which contribute to the health of the overall watershed.

This change will enable the Board to focus on our core mission of conserving and enhancing the local watershed environment for future generations of humans and wildlife.

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Baxter Creek Watershed Alliance (Corporation# 1348381-9) is a Canadian federal nonprofit corporation entity registered with Corporations Canada, located in the Village of Millbrook, Township of Cavan-Monaghan, County of Peterborough, Ontario, Canada.

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