

THE BAXTER



Summer 2025 | Volume 4 | Issue 1

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To learn more about Baxter Creek Watershed Alliance visit our website at:

<https://baxtercreekwatershed.org/>



The former entrance to the Millbrook Correctional Centre (Photo courtesy: Kirk Hillsley).

A LIVING LABORATORY: LAND-BASED LEARNING IN MILLBROOK

At a recent meeting with a representative from a local First Nation, BCWA learned about the Indigenous concept of “Land-based Learning”, an approach about learning from the land and understanding our connection to it. What can we learn from nature? How do we benefit from nature’s resources? And how can we give back in return?

Take a quick look at the image below of the tree. Do you see one White Pine or two? At first glance, it may appear as a single tree, especially if you don’t notice the two trunks. Living things in nature have a remarkable way of coexisting, sharing space, and even becoming dependent on each other.



As our community and watershed changes over time, we adapt to the environment as it does to us. Finding a balance between what we value or take from nature and the pressures we place on nature is critical to our well being and the well being of the plants and animals that inhabit it. Whether you garden, fish, hunt, hike, bike, or

just get out in nature from time to time, we all benefit from a clean and healthy watershed.

It's also important to consider the value of nature for the direct benefits they provide humans, and also the intrinsic values they provide to support biodiversity and life across the watershed and downstream. For instance, in Millbrook and in the Baxter Creek watershed, the environment provides the essentials of life. Groundwater is the primary source of drinking water for everyone living in the area, whether you live in a rural area on a residential well or in the Millbrook settlement area where drinking water is sourced from the groundwater and mostly made available through the municipal well drinking water system.

Our drinking water system is protected by policies and regulations to ensure the quality and quantity of water is protected at the source and the distribution system. For example, ensuring contaminants are not introduced into the water supply and treating the water for distribution. More broadly, source water is considered in the context of environmental issues associated with drinking water. Environmental issues include such things as monitoring and mitigating the impact of low water conditions on the supply of water. This summer we experienced low water conditions across the Otonabee River basin which includes the Baxter Creek watershed. Were there any signs of low water or drought the land taught you ahead of receiving these notices? Perhaps you observed low water in ponds on your property or drainage ditches in your fields? Or you noticed leaves on trees browning or changing colour ahead of normal? Appreciating these connections is just the start of land-based learning.

“One way or another, we must all learn to live together in the future in ways that address the legacy of colonialism, uphold rights, and transform the status quo.”

- Jody Wilson-Raybould, from “True Reconciliation: How to be a Force for Change”

ANNUAL REVIEW OF OUR STRATEGIC PLAN

Since releasing its 2024–2027 strategic plan, the Baxter Creek Watershed Alliance has strengthened its governance, renewed its community engagement strategy, and merged the Old Millbrook Jail Lands initiative into its operations. The organization is actively working with First Nations, schools, volunteers, and advisors to promote environmental stewardship and biodiversity education across the watershed. Read on to learn about ways for members of the community to become more involved.

This year BCWA decided not to hold an open public watershed forum. Instead, we are focused on preparing for our annual general meeting (AGM) in September 2025 which will include an invitation-only AGM convention of volunteers, committee members, advisors, and the Board of Directors. Following the AGM stay tuned for a renewed engagement strategy and strategic plan. If you are interested in volunteering with the BCWA or interested in learning more about how you can participate in our organization, please contact us anytime at baxtercreekwatershed@gmail.com.

In 2024, the Baxter Creek Watershed Alliance (BCWA) released its first strategic plan (see <https://baxtercreekwatershed.org/our-strategy>). Although designed as a three-year strategy, the plan was

intended to be a living document, reviewed and updated annually. Since the release of the plan, the organization has undergone several changes, most notably the dissolution of the Old Millbrook Jail Lands Association (OMJLA) as an independent nonprofit. Some OMJLA directors stayed on with BCWA as non-voting members on board committees, while others remain involved as volunteers. Although OMJLA no longer operates as a separate entity, it continues to be a strategic initiative of BCWA through engagement and consultation with two of the local Williams Treaty First Nations. BCWA has been actively engaging with Alderville First Nation and Hiawatha First Nation to consider the goals of the OMJLA initiative and the rights and interests of First Nations.

On January 15, 2025, the BCWA Board of Directors approved an annual review process for the strategic plan and committed to developing an operational work plan. The purpose of the review is to refine the board's strategic direction and support the creation of a long-term, fiscally sustainable operational plan.

Since releasing the 2024-2027 strategic plan, the board has established a solid governance framework. This includes an amended set of corporate bylaws, which have been filed with Corporate Canada, as well as a comprehensive set of Board policies and procedures bound in a Board handbook. The updated bylaws reflect the resolved membership structure of BCWA which has been affirmed as the Board of Directors with full voting membership and a second class of non-voting Members elected by the Board to committees.

Earlier this year, the Board reaffirmed and formally re-established the following committees:

- **Community Engagement and Education Committee**
- **Governance Committee**
- **Watershed Research Working Group**

In preparing for the annual review of the strategic plan, the board also renewed their community engagement strategy which provides a range of opportunities for community members to become involved with the organization in the following ways:

Student Engagement

- Post-secondary student placements and projects (college and university level)
- High school student volunteers

Volunteer Roles

- Community volunteers and former student volunteer placements
- Activities include (but are not limited to) financial advice, legal counsel, environmental monitoring, restoration, communications, website development, mapping, and GIS

Leadership and Advisory Roles

- Committee members
- Advisors to the Board
- Board Directors

Over the past year and a half, the BCWA Watershed Research Working Group has been meeting regularly with teachers from the local public school. The teachers approached BCWA to explore ways of incorporating local environmental and biodiversity knowledge into classroom activities. This collaboration supports the Ontario curriculum, which emphasizes biodiversity education and the integration of local issues into teaching and learning.

Local biodiversity and environmental learning are integrated into the Ontario curriculum through a comprehensive, cross-curricular approach that spans multiple grade levels and subject areas. Here's some the ways the learning is integrated that relate to the objectives of BCWA:

Integration Across Subjects

- **Science and Technology:** Students explore ecosystems, species interactions, and human impact on the environment.
- **Social Studies, Geography, and History:** Lessons include environmental stewardship, land use, and Indigenous perspectives on biodiversity.

Curriculum Frameworks

- **Ontario Curriculum, Grades 1–8 and The Kindergarten Program:** [Environmental Education Scope and Sequence of Expectations \(2017\)](#) environmental education—including biodiversity—is woven into each grade level and subject.
- The [Policy Framework "Acting Today, Shaping Tomorrow"](#) emphasizes learning *in, about, and for* the environment, promoting environmental responsibility among students and educators, including a policy for “*Student Engagement and Community Connections*”

Learning Goals

- Encourage **critical thinking** about environmental issues.
- Foster **citizenship and personal responsibility**.
- Promote **environmental stewardship** through school and community initiatives.

Example Activities

- Biodiversity-focused projects like bird classification, habitat assessments, and citizen science programs help students connect with local ecosystems.

CREATING A WATERSHED PLAN: WHAT THIS MEANS FOR THE BAXTER CREEK WATERSHED

Peterborough County is working on a new Watershed Plan to keep our land and water healthy now and in the future. A watershed is like a giant bowl — when it rains or snows, all the water ends up flowing to the same


spot, like a river or lake. The County is studying things like forests, wetlands, and underground water to figure out what shape they're in and how to protect them.

Why it matters:

- The plan helps prepare for changes, like new development or climate change.
- It will guide how the County takes care of nature and builds responsibly.
- Experts and local groups are contributing to the plan, including First Nations and conservation organizations such as Baxter Creek Watershed Alliance.

What's happening now:

- The plan has three parts. The first one is finished, and the second part—where they learn more about the watershed and share ideas—is happening now!
- Anyone in the community can get involved by joining virtual meetings or sending in ideas.

 **Want to help?** You can give feedback or ask questions by emailing planning@ptbocounty.ca. You can also monitor and review progress for the plan by visiting the watershed plan web page on the County website at: <https://www.ptbocounty.ca/en/growing/watershed-plan.aspx>. This is a chance for your voice to be part of protecting the land and water around us!


*"I think as you we explore further into the ethical space we find out, while we come to you know, **a common grounding**. We come to a point where well yeah, "I can see you as a human now", you know, when we take all these webs and these **curtains of institutional or systemic curtains**. You know, we **start to see our Humanity so it arrives there so there's no need to question about the differences.**"*


- Elder Willie Ermine, "What is ethical space?"


SUPPORTING THE FRONTENAC ARCH BIOSPHERE


Local Groups Team Up to Support Conservation Mapping.

The Baxter Creek Watershed Alliance (BCWA), a local environmental group based in Millbrook, has signed a 2025-26 agreement with the Frontenac Arch Biosphere Network (FABN) to help support a special conservation mapping project.

 **What's the Deal About?** The two groups will work together to build and manage mapping tools that show where important natural areas are in the Frontenac Arch Biosphere Region. These tools will help FABN protect wildlife, plan conservation actions, and share useful information with communities and partners.


 **BCWA's Role.** BCWA will give advice, help train FABN staff, and build helpful things like interactive maps and online StoryMaps. These tools will show the biodiversity of the region and how it's being protected. BCWA will also help make sure FABN can keep these maps updated and working well in the future.


 **Timeline & Support.** The partnership officially started in April 2025 and lasts until the end of March 2026. FABN is providing funding to BCWA to support their work, and BCWA will share progress through regular meetings and reports.


 **Why It Matters.** Both groups say this partnership is a win-win. It helps FABN reach their goals, gives BCWA a chance to share their knowledge, and supports better planning for nature conservation. It's a great example of regional teamwork for a healthier environment.


Stay tuned for updates as this exciting project moves forward! 

BAXTER CREEK STUDENT PROJECT UPDATES

 **Student Research Milestone** BCWA celebrates a major achievement with 35 post-secondary students contributing to research projects since 2021, including a standout groundwater review by Trent University's Keyana Kamps.

 **Forest Mapping with Lidar** A phase-four lidar project with Fleming College has produced a forest canopy height model, with updated data from 2025 expected to reveal changes over time.

 **New Conservation Tool: CMAT** BCWA and Algonquin College developed the Conservation Measures Assessment Tool (CMAT), a free GIS plugin to help prioritize land for conservation—supporting Canada's “30 by 30” biodiversity goals.

 **Open Access & Collaboration** All student research and tools like CMAT will be available through BCWA's Watershed Library, promoting open science and collaborative conservation planning.

This year will mark 35 post-secondary or post-graduate students collaborating with Baxter Creek Watershed Alliance in research and development (R&D) projects related to our strategic goals and objectives through our Watershed Research Working Group committee. Of these students, 33 will have completed their academic learning requirements that helped them graduate through their programs and completing collaborative projects with BCWA board mentors since we initiated our work in 2021. This is a remarkable achievement and demonstrates that we live in a vibrant natural classroom and laboratory.

One of the projects that continues to receive attention is 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. BCWA has recently shared this research paper with two local First Nations. We are working through an update to the report and plan to release openly through our website's [Watershed Library](https://baxtercreekwatershed.org/watershed-library) (<https://baxtercreekwatershed.org/watershed-library>). You will eventually find all of our student reports online in the [Watershed Library](https://baxtercreekwatershed.org/watershed-library).

During the fall and winter of last year, BCWA complete a watershed planning terms of reference report with a group of seven students from Queen's University School of Urban and Regional Planning (SURP).

This report was developed as part of the SURP 825 Project Course in the Queen's Master of Urban and Regional Planning program. It provides a comprehensive framework for initiating watershed planning for the Baxter Creek Subwatershed, which is one of the critical headwater streams originating from the Oak Ridges Moraine and flowing through Cavan Monaghan Township into the Otonabee River.



Project team, from left to right: Emily Charby, Ilias Kokoros, Christina Pillitteri, Sarah Mallen, Graham Whitelaw (SURP Professor, BCWA Director), Liam McIlroy, Ben Savage, Jennifer Rodriguez

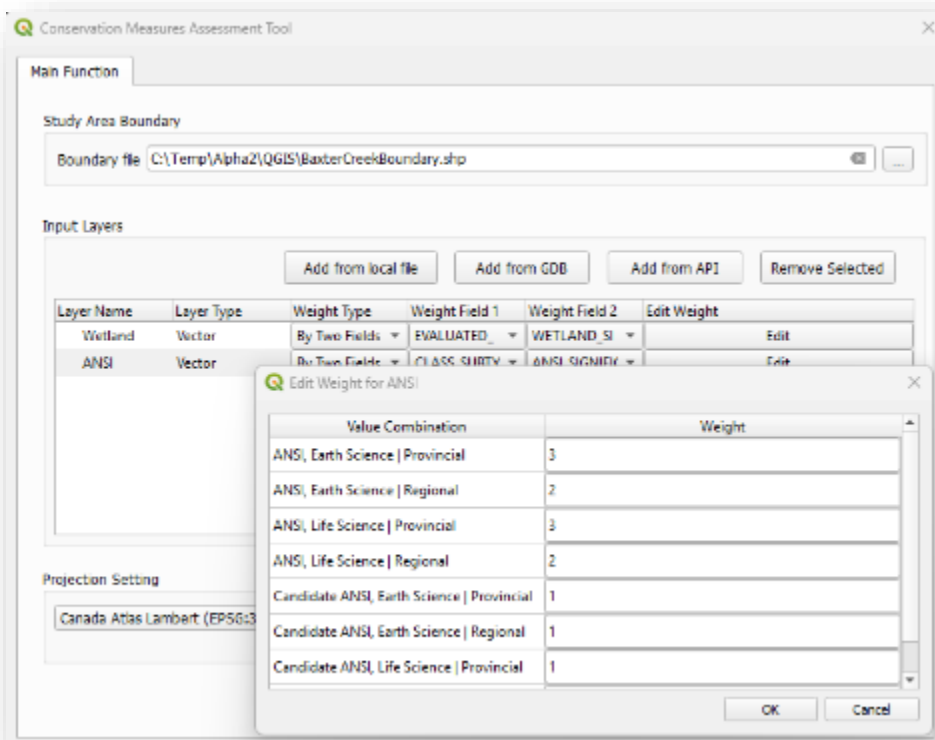
BCWA has also just completed two exciting research projects with two colleges.

Working with a final student from Fleming College's Geomatics Program (the program was suspended in 2024), BCWA supported a phase-four lidar elevation data project to enhance our understanding of the forest resources across the Baxter Creek subwatershed. Working with airborne lidar data collected in 2017, this mapping has enabled BCWA to develop a quantitative base data Canopy Height Model of the forest resource. BCWA is aware that the Ministry of Natural Resources just re-flew the entire watershed area again in the spring of this

year. BCWA is excited to work with this latest lidar to develop a temporal and spatial analysis for the forest resource change from 2017 to 2025. We hope to share this analysis with you next year once complete.

BCWA is also in the final stages of working with a three-student member team from Algonquin College's Geomatics Program to develop a **Conservation Measures Assessment Tool (CMAT)**.

The Conservation Measures Assessment Tool (CMAT) Multi Criteria Decision Analysis (MCDA) is an open-source decision support plugin designed to help users assess and prioritize geographic areas for conservation, land-use planning, or environmental assessment using a flexible framework. The assessment is based on the weight that existing conservation policy measures have in providing long-term protection of a natural heritage area feature. A free CMAT plugin and toolbox is available for both QGIS and ArcGIS Pro desktop GIS systems. CMAT enables users to define custom criteria and apply flexible weighting strategies to spatial data layers. Weights can be assigned uniformly per layer or dynamically based on one or two attribute fields, enabling detailed and context-specific prioritization.



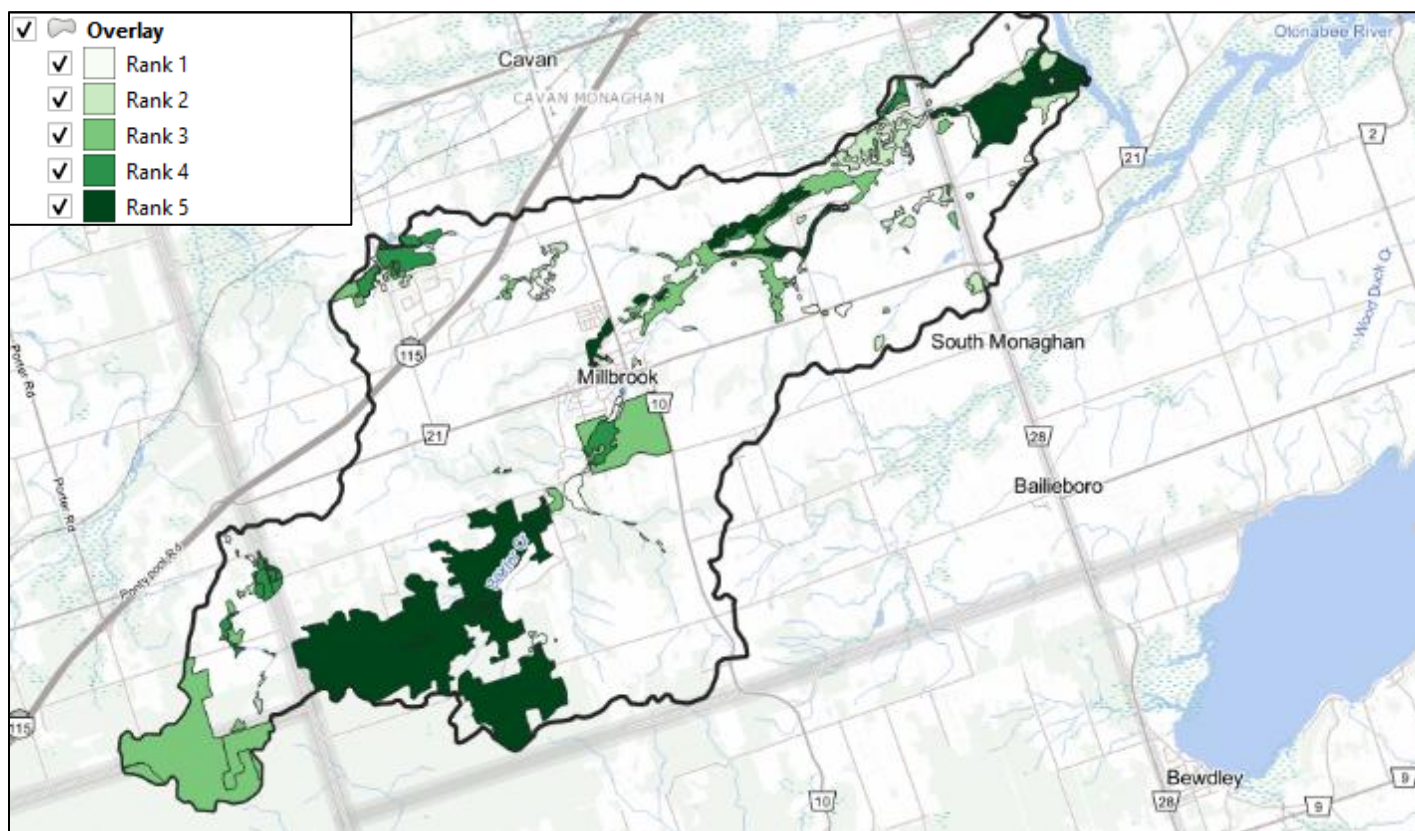
CMAT is intended to be used in a collaborative manner whereby stakeholders and right holders to an area of interest can define the natural heritage area layers for input and the associated weight of the policies for the areas protection. A user is tasked to input the layers, enter the associated weights, and run the analysis. The outputs are then summarized into a rank-order scale which decision-makers can use for assessment of conservation measures.

While the tools were designed for use in Ontario, Canada, CMAT is flexible and can be used under any

planning authority regime. This can be at the local municipal or county, provincial or state level or even more broadly. However, it is hoped that the tool is used at a watershed or subwatershed level and has not been tested for areas beyond the general subwatershed size. According to USGS standards, a subwatershed - which is the 12-digit hydrologic unit level in the Watershed Boundary Dataset (WBD) - typically covers an area of 10,000 to 40,000 acres, or approximately 40 square miles or about 104 km².

The tool is designed with simplicity in mind to enable users to process many input layers in one run and perform iterative analysis as required to reach group consensus on priority areas for conservation. The outputs

may be useful for determining potential parcels or areas of land for protected areas as Other Effective Area-based Conservation Measures (OECMs). OECMs are areas that provide equivalent conservation benefits to protected areas but are not managed primarily for the conservation of nature. Like protected areas, OECMs can be governed by private individuals or organizations, Indigenous Peoples and local communities or governments.



Main analysis map output from the CMAT tool plugin in the open source QGIS software.

OECMs may then be considered for contribution to the federal Canadian Protected and Conserved Areas Database (CPCAD) or other national protected areas databases. CPCAD is then integrated into international sources to assess how nations are progressing towards the COP-15 objectives to conserve 30% of the world's lands and waters biodiversity by 2030. This objective is commonly referred to as the "30 by 30" initiative. In December 2022, 30 by 30 was agreed at the COP15 meeting of the Convention on Biological Diversity and became a target of the Kunming-Montreal Global Biodiversity Framework. Indigenous rights and interests should be considered in the collaborative process. Indigenous engagement and endorsement of conservation measures should be consulted before any decisions are made at the landscape level on Indigenous traditional territories.

CMAT will be released openly and freely for use through the BCWA website under the **MIT License** which is a [permissive software license](#) originating at the [Massachusetts Institute of Technology](#) (MIT). It's our hope that this tool will enable other organizations to realize the benefit of collaborative decision-making to support conservation planning.

WHAT LIES AHEAD FOR THE OLD MILLBROOK JAIL LANDS ASSOCIATION?

As reported in the Summer 2024 issue of the Baxter ([Volume 3, Issue 3](#)), at the June 19, 2024 board meeting of the Old Millbrook Jail Lands Association (also known as OMJLA), a decision was made to absorb the objectives of the OMJLA association into BCWA and dissolve the OMJLA as a stand-alone corporation. Two directors of the OMJLA stayed on as non-voting committee members of BCWA's Community Engagement and Education Committee.

BCWA will continue to monitor the provincial surplus process for the former Millbrook Correctional Centre property. 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 watershed. The Board of Directors has resolved to engage with local First Nations in this process, under the spirit of Free Prior and Informed Consent ([FPIC](#)) of Indigenous Peoples for projects that may affect the lands they own, occupy or otherwise use, as set forth by the United Nations Declaration on the Rights of Indigenous Peoples ([UNDRIP](#)).

“Where common memory is lacking, where people do not share in the same past, there can be no real community. Where community is to be formed, common memory must be created.”

- George Erasmus, from “True Reconciliation: How to be a Force for Change”

BCWA does not endorse the establishment of new, legislated protected areas without the consent of First Nations on whose traditional territories or homelands the areas are to be established. BCWA does support interim protection measures that prevent ecological degradation or site development while engagement or consultation is undertaken. In the context of Indigenous relations, engagement refers to the respectful, meaningful, and sustained process of building relationships between Indigenous communities and entities such as governments, corporations, or organizations. Consultation, however, must occur on a government-to-government basis and, therefore, the duty to consult can be legally satisfied only by the Crown. It follows then that consent for any new, legislated protected areas must be given by an Indigenous nation to the Crown. Establishing a protected area should either be led by the Indigenous nation or – if led by BCWA, the government, or another group – should adhere to the principles of FPIC. In regard to the collection of data, BCWA supports First Nations principles of ownership, control, access, and possession – more commonly known as OCAP – which asserts that First Nations have control over data collection processes, and that they own and control how this information can be used (See: <https://fnigc.ca/ocap-training/>).

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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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