



Do you have an interest in conserving natural resources in your watershed and community? Do you have skills that can benefit our growing non-profit? Consider applying as a volunteer. See our website for more details or drop us a line explaining your interests to baxtercreekwatershed@gmail.com!

Special thanks to Connie Danielsen, owner of Go Figure! - Business Services for helping us complete our annual financial compilation and reporting to Canada Revenue Agency!

Onboarding BCWA fall 2023 student projects (details inside):

- Keyana Kamps, “Groundwater Contamination Study of former Millbrook Correctional Centre” (Trent, Community Research Centre, Department of Forensic Science)
- Mariah Shaw, “Baxter Creek Benthos Study” (Trent, Community Research Centre, School of the Environment)
- Annie Robertson, “Municipal Tree Preservation” (Trent, Community Research Centre, School of the Environment)
- Payton Hill, Amanda Manning, Hayley Roberts, team Today for Tomorrow or “T4T” Biodiversity Assessment “30 by 30” (Fleming, Credit for Product Project, Ecosystem Management Technician Program)

BAXTER CREEK WATERSHED 2023 COMMUNITY WATERSHED FORUM: “WATERSHED RESILIENCY”

On Monday, September 25, 2023, Baxter Creek Watershed Alliance (BCWA) hosted our second Community Watershed Forum which addressed the theme of “Watershed Resiliency”.

We welcomed a room of 70 guests along with six tables for our exhibitors to share information about their services and work in the community. A number of other key players were in the room to engage and answer questions including staff from our local planning authorities.

Our exhibitors included:

- ALUS Peterborough (formerly Alternative Land Use Services)
- Cavan Monaghan Community for Common Grounds
- Kawartha Land Trust, Partners in Conservation Program
- Squirrel Creek Farm
- Trent University, Community Research Centre
- Trent University, Institute for Watershed Science
- Trout Unlimited Millbrook Chapter

We were honoured to welcome Chief Taynar Simpson from Alderville First Nation on Rice Lake as our keynote speaker this year. An anthropologist by training, Chief Simpson has dedicated his life and career to the advancement of Indigenous causes in Canada. For nearly thirty years, he has been involved in the National dialogue surrounding the advancement of Indigenous

people in Canada. For the past 25 years, Chief Simpson has been leading national reconciliation projects.

At the National Defence Headquarters in the mid-1990's, Chief Simpson was part of the team that brought Employment Equity and gender integration to the Canadian Forces. In the late 1990's, he started working on the Indian Residential School (IRS) litigation, IRS Alternative Dispute Resolution and eventually the IRS Settlement Agreement (IRSSA) process that started in 2006. Other positions included Communications Analyst at both INAC and the Assembly of First Nations (AFN), Policy Analyst in Socio-Economic Policy and Programming at INAC and field reporter for Windspeaker news magazine.

In 2000, Chief Simpson consolidated his experience by forming the company, Wampum Records. Since then, his company has become Canada's premier research and consulting company on Indigenous issues. Wampum Records has led the research on Indian residential schools resolution, Day Schools resolution, and Sixties Scoop resolution. Recently, Chief Simpson was the project lead for the National Centre for Truth and Reconciliation (NCTR) which identified the thousands of children who perished at Canada's residential schools.

Chief Simpson has sat on several Boards and Trusts. These include Chairman of the Board of Alderville Solar Inc. which is Canada's largest wholly Indigenous-owned energy project. He is currently the vice-Chair of the Dnaagdawenmag Binnoojiiyag Child and Family Services (DBCFS) Board of Directors. Chief Simpson is also the vice-Chair of the Ogemawahj Tribal Council (OTC) which represents the interest of six local First Nation communities. Chief Simpson has been a Trustee on both the Alderville Williams Treaty Settlement Agreement Trust (AWTSAT) and the Alderville Community Trust (ACT). Chief Simpson currently serves as the Chief of Alderville First Nation where he previously held the role of Councillor. Chief Simpson is looking forward to bringing his experience and knowledge to his new role as Chief to help guide Alderville through the new era of reconciliation in Canada.

Chief Simpson spoke passionately about the resilience of Indigenous people in preserving their culture, identity, and connection with the land and water. He spoke to the parallels of cultural resiliency and watershed resiliency and the value of shared learning and collaboration.

Watershed resiliency is the ability of a watershed to maintain its characteristic system state while resisting, adapting to, and reorganizing after a disturbance whether from a hydrological source (for example, drought or flooding) or biogeochemical (for example, pollution such as from excessive sediment or nutrient loadings).

A focus of BCWA's work is to identify and characterize our watershed ecosystem features including what are known as "vulnerable waters" which are critical to watershed resiliency. BCWA is approaching this task by delineating and characterizing each tributary catchment within the Baxter Creek subwatershed (for example, Little Creek, Silver Springs Creek, Jail Creek, and others). This work includes identifying vulnerable waters including areas such as wetlands outside of floodplains (technically called "isolated wetlands") and headwater streams which are the source areas of our creeks and streams.

Following the proposed provincial guidance on watershed planning, over the last two years BCWA has been actively characterizing each catchment within Baxter Creek as well as the entirety of the watershed and our neighbouring Cavan Creek and Squirrel Creek subwatersheds (anticipating that community members will

support future Watershed Alliances to steward those subwatersheds). As per proposed provincial guidance, characterization is a vital component of watershed planning which involves establishing a baseline of existing watershed conditions.

The work BCWA is completing at this initial stage includes such activities as:

- Identifying aquatic and terrestrial habitats;
- Identifying the quantity of surface and groundwater resources, relationships, and water related dependencies;
- Quantifying precipitation (rainfall and snowfall);
- Quantifying groundwater;
- Quantifying surface water;
- Identifying existing flow regimes (peak flow volume and rates);
- Identifying existing water balance (recharge areas, rates and sensitivity);
- Identifying features and functions of the natural heritage system (interconnections between and among aquatic, terrestrial and groundwater systems, buffers and linkages); and
- Identifying constraints (floodplains, steep slopes, erosion areas, wetlands, forests, habitat, corridors, buffers, wellheads).

Watershed characterization is the fundamental starting point of a watershed planning study and is an essential component of watershed planning, and provides the basis for developing goals and targets, evaluating land use and management scenarios, and developing management approaches. An understanding of the features, functions, and linkages within a catchment can also be used in monitoring effectiveness of management actions and ecological change.

Ecological monitoring can fill gaps in areas where there is no existing information or data available, especially in areas where growth and development are directed. BCWA has adapted some ecological monitoring protocols to meet local needs and developed tools that can be used by volunteer citizen scientists. For example, BCWA localized a breeding frogs and toads spring monitoring protocol that is now supported in a custom mobile application available for free for volunteers to use on their smartphone Android and iOS operating systems.

Watershed planning takes an integrated approach to identifying, protecting, and restoring key features and functions of the watershed. BCWA has been working closely with faculty and students across inter-disciplinary programs at Fleming College and Trent University to complete this work. We are extremely grateful for the support students and faculty have provided to engage in this meaningful work across our watershed.

“Autumn is a second spring when every leaf is a flower.”

— Albert Camus

WHAT'S NEW WITH BAXTER CREEK WATERSHED ALLIANCE?

An inside scoop on a recent pollinator project.

A Meadow in The Making with Trent University Students

On September 16th, 2023, a group of enthusiastic Trent University students came out to a local property just outside of Millbrook, Ontario. The Fern Hill property is a hidden gem among the rolling hills of the Kawarthas,



that hosts many unique and interesting species. The goal for the students that attended the event was to help start the process of creating a pollinator meadow within the property. The students were tasked with learning about the importance of pollinators, prepping seed, removing shrubs from the field and casting the seed later on that they had cleaned. This event was hosted through the Trent Research Community Centre with the goal of engaging students in the outdoors and encouraging them to learn more about the vast landscapes of the Kawarthas while they

earned volunteer hours towards this course.

The event started off on day one with a nature walk atop a glacial feature and shortly after the students split up into groups. Some got to work on preparing the meadow for it to be seeded while the others focused on cleaning and preparing the seeds to be sown. One group removed small lilac and hawthorn shrubs with pruning shears. Removing these plants was done to allow the wildflowers to have



less competition as they grow. Some of the species that were put in the meadow included wild bergamot, lupines, blazing star, butterfly weed, cone flowers, penstemon and lunaria.

The next day the students started out with creating signs for the meadow so that

anyone driving up the laneway would know what was planted. After listening to the birds and creating masterpieces the students got right to work on sorting the seeds. Each seed was placed in an envelope and later distributed to



individuals. As the day progressed, seeds were cast in certain locations across the field. Prior to the students arriving the field had areas that were mowed to allow for the seeds to make direct contact with the soil to encourage germination. After walking the planting site full of praying mantises, the students packed up to head back to Trent with more knowledge about pollinators and wildflowers.

Many thanks go out to Baxter Creek Watershed Alliance for coordinating the event, to Megan Greenwood for managing the project, to Brittany Finigan from the Trent Community Research Centre for organizing all the students and making things possible, to Blossom Hill Nursery for providing the seed and to Kawartha Land Trust for providing the hand tools for the students to use. A final huge thank you goes out to the landowner of Fern Hill for providing the equipment needed for the event and for allowing the students to experience nature in such a pure form.

“Life starts all over again when it gets crisp in the fall.”

- F. Scott Fitzgerald

BAXTER CREEK WATERSHED: FALL 2023 STUDENT PROJECTS

How our projects inform watershed planning while developing environmental leaders of tomorrow.

Since 2022, BCWA has supported six students at Fleming College and Trent University through completing course and credit requirements across different fields of study. This programming has been mutually beneficial, helping BCWA work on our watershed research to support future planning needs while supporting students in their academic careers.

This fall BCWA is ambitiously onboarding an additional six students to focus on priority research projects across the watershed and Cavan-Monaghan Township. These projects include:

- Keyana Kamps, “Groundwater Contamination Study of former Millbrook Correctional Centre” (Trent, Community Research Centre, Department of Forensic Science)
- Mariah Shaw, “Baxter Creek Benthos Study” (Trent, Community Research Centre, School of the Environment)
- Annie Robertson, “Municipal Tree Preservation” (Trent, Community Research Centre, School of the Environment)
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Keyana's groundwater contamination study is being supervised by Dr. Joel Cahn, a Forensic Scientist at Trent University. Keyana is in her final year of study and this research project is a foundational full year undergraduate thesis to review the context of the former Millbrook Correctional Centre in the broader context of Ontario's brownfield regulatory and policy regime. Her research will help clarify in plain language the environmental assessments and information gaps for the property. It is hoped this research will be a useful baseline to support any future ownership and use of the property. The research is being planned as an interdisciplinary study to pull in subject matter experts across the fields of forensic science, environmental law, environmental science, and physical geography.

Mariah is also a fourth-year student, and her study involves reviewing existing benthic data and sampling new sites across vulnerable waters of the Baxter Creek watershed. This is being conducted as a full-year major research paper by Mariah, in her final year of Environmental Science, supervised by Dr. Kaitlyn Fleming. Mariah is a student placed with BCWA through Trent University's Community-based Research Centre. Her research will involve sampling of macroinvertebrates using the Ontario Benthos Biomonitoring Network (OBBN) protocol, which is an environmental tool designed to use benthic (bottom-dwelling) organisms as indicators of stream health. Aquatic macroinvertebrates are insects in their nymph and larval stages, snails, worms, crayfish, and clams that spend at least part of their lives in water. They play a large role in freshwater ecosystems by recycling nutrients as well as providing food to higher trophic levels. Macroinvertebrates are good indicators of water quality as they respond to changes in water quality (e.g., water pollution), after a relatively short exposure.

Annie Robertson is a placement student from the Trent School of the Environment's placement course. Annie is in her final year at Trent completing a Bachelor of Science in Biology and Environmental & Resource Science. Her placement with BCWA requires 80-100 hours of study this term. She will be working under a BCWA board mentor on assessing the provincial and municipal policy framework for supporting municipal tree preservation.

Lastly, but certainly not least, Payton Hill, Amanda Manning, Hayley Roberts are from Fleming College's Ecosystem Management Technician/Technologist Program studying under Josh Feltham, PhD Professor of Environmental & Natural Resource Sciences. Their team, called *Today for Tomorrow* or "T4T" is conducting a comprehensive biodiversity assessment of the Baxter Creek watershed following the international standards and guidelines established by the [United Nations Biodiversity Conference \(COP 15\)](#) held last year in December 2022 in Montreal. The UN plan includes measures to halt and reverse nature loss, including putting 30 per cent of the planet and 30 per cent of degraded ecosystems under protection by 2030 (or "30 by 30"). This is truly a flagship project for BCWA!

T4T is localizing the UN plan to assess how well we are meeting these objectives at a local level and what needs to be done in our own community to ensure we are protecting "30 by 30". While we may not have much control over issues in other parts of the world, we certainly can collaborate and come together locally to conserve and enhance our local watershed environment for future generations of humans and wildlife.

*“And some time make the time to drive out west
Into County Clare, along the Flaggy Shore,
In September or October, when the wind
And the light are working off each other
So that the ocean on one side is wild
With foam and glitter, and inland among stones
The surface of a slate-grey lake is lit
By the earthed lightning of a flock of swans,
Their feathers roughed and ruffling, white on white,
Their fully grown headstrong-looking heads
Tucked or cresting or busy underwater.
Useless to think you’ll park and capture it
More thoroughly. You are neither here nor there,
A hurry through which known and strange things pass
As big soft buffetings come at the car sideways
And catch the heart off guard and blow it open.”*

— Postscript

By Seamus Heaney

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Baxter Creek Watershed Alliance (Corporation# 1348381-9) and Old Millbrook Jail Lands Association (Corporation# 1348608-7) are Canadian federal nonprofit corporation entities registered with Corporations Canada, located in the Village of Millbrook, Township of Cavan-Monaghan, County of Peterborough, Ontario, Canada.

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