Kelly Lush

From: CNS Office <cns_office@cns-snc.ca>

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CANADIAN NUCLEAR SOCIETY



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President's Message



Doddy Kastanya

Dear fellow CNS members,

Welcome to the second issue of the 2023 CNS Newsletter. I would like to use this opportunity to provide you with some updates related to activities around the CNS since our last Annual General Meeting in June as well as providing you with a sneak peek of what you should expect to see in this edition of the CNS Newsletter.

In early July 2023, I attended the CNA CEO Retreat at the Millcroft Inn. in Alton, ON. The meeting was attended by major players in the Canadian nuclear community. There were lots of discussions related to the future of the nuclear energy in Canada. The latest development related to the announcement at Bruce Power and at OPG (which happened the day after the retreat) was discussed. Challenges related to the deployment of new fleets of reactors in Canada dominated the discussions throughout the day. Toward the end of the meeting, I had a discussion with the CEO of COG about the potential of CNS supporting some trainings to the employee of SNN in Romania. This potential collaboration aligns well with the vision of the CNS which places us as the organization of choice in Canada for the nuclear science, engineering, and technology community and its stakeholders seeking accurate information about nuclear related disciplines and issues.

As the new CNS council began its work, we held our first council meeting on July 28, 2023. During this meeting, the chair and co-chairs for all Divisions and Committees of the CNS were confirmed. In addition, the members of the council appointed Derek Mullin as a member of the council and subsequently as the 1st Vice President of the CNS to fill the gap left by Moe Fadaee after his resignation. With this new appointment, I passed the responsibility of chairing the organizing committee for the 2024 Annual CNS Conference to Derek. I am happy to let you know that the preparation for the conference is progressing well.

As you know, the main business of the CNS is organizing nuclear-related conferences. In our history, some of the conferences required the support of a Professional Conference Organizer (PCO) during the preparation and execution of the conference. So, we have executed a new initiative to hire a single PCO to support multiple conferences for a couple of years. Earlier this month, we have sent out the request for proposals to several PCOs to support our large conferences in 2024 and 2025. Mohamed Younis is leading the committee for this initiative.

Concerning the contents of this edition of the CNS Newsletter, you will find the usual reminders of upcoming events that might interest you as well as something new, a look back at one of our recent successful conferences. In this edition of the Newsletter, we shared sad news of the passing of two members of the CNS along with notes of their valuable contributions to the Canadian nuclear community. We are also fortunate to have a couple of contributions from our members – Jeremy Whitlock and Morgan Brown. To complete this edition, we include the essay from the first-place winner of the 2023 Student Essay competition.

Finally, I would like to thank Cheryl Tasker-Shaw for her support in gathering materials for this edition of the Newsletter and providing supervision throughout its production. It is wonderful to have Cheryl's continued support to the effort of publishing the CNS Newsletter throughout the years. However, I am sure she will welcome any members of the CNS who would like to volunteer in helping her out and sharing her joy through the journey. Don't be shy! It is a nice and productive way of showing your support to our organization and to the nuclear community in Canada.

Recent and Upcoming Events

From Chary, on ICI conference

During July 23-27, 2023, Canada hosted the 11th International Conference on Isotopes (11ici.org) in Saskatoon, one of a series of conference under the umbrella of the World Council of Isotopes (wci-ici.org). It was held as a joint partnership of the University of Saskatchewan, Sylvia Fedoruk Centre of Nuclear Innovation and Discover Saskatoon. The activities included a pre-conference summer school during July 20-22, 2023. Organized as several sessions in five tracks concerned with various aspects of isotopes from production, supply and demand, the impact

of policies and regulations and the public perception of isotopes, this conference was well received by the international participants from over 20 countries. A special panel session of Marie Curie, Harriett Brooks and Sylvia Fedoruk was held to acknowledge the prominent roles of women nuclear scientists internationally and locally. Young participants' contributions were recognized by a best abstract award. The participants were reminded of ubiquitous presence of isotopes and their influence in scientific research in a session on isotopes in Cosmos and Astrophysics. The 12th conference will be held in Florence, Italy during February 2026.

Summer School

In July, the University of Saskatchewan and the Sylvia Fedoruk Canadian Centre for Nuclear Innovation hosted an Isotope Summer School in conjunction with the 11th ICI meeting. A dozen students and young professionals from countries around the world had the opportunity to learn about the science of radionuclides, while getting hands-on experience in a nuclear facility. Participants benefited from interacting with nuclear science experts from across Canada, while building their professional networks through small-group projects and presentations.







Canadian Workshop on Fusion Energy Science and Technology (CWFEST) 2023

OCTOBER 24 ALL DAY

The Canadian Workshop on Fusion Energy Science and Technology (CWFEST-2023) is a 1-day virtual event during which representatives from a number of fusion startups and organizations will discuss their successes and challenges in commercializing fusion energy.

This workshop is a collaboration between the Canadian Nuclear Society Fusion Energy and Accelerator Science and Technology Division (CNS-FEASTD) and the Fusion Energy Council of Canada (FECC).

Canadian Workshop on Fusion Energy Science and Technology (CWFEST) 2023 (xcdsystem.com)



DIET 2023: Innovation Unleashed

Submit An Abstract Today!



The Canadian Nuclear Society invites you to be a speaker at the Fourth International Conference on Disruptive, Innovative, and Emerging Technologies in the Nuclear Industry. This conference will be held from November 6th to 8th 2023. Day 1 is hybrid (in-person & virtual), while Day 2 & 3 are virtual. The in-person venue will be in downtown Toronto at a central waterfront location, to be announced soon.

The theme of this year's conference is Innovation Unleashed. The CNS DIET 2023 Conference provides a forum for exchanging views, ideas, and information relating to DIET, such as Artificial Intelligence, Machine Learning, Data Analysis, Big Data, and Digital Twins. Visit our website to learn more.

The Technical Committee invites submissions in a wide array of technical areas within the nuclear industry, with the criteria for submission being: an abstract of fewer than 200 words, providing a brief background, objective, and highlights of the proposed presentation. (No paper is required!)

Deadline for submissions is September 17th!

Visit our online platform to get started on your application today!

Want to connect and network with the brightest minds in our industry? Early bird cutoff is September 30th. The capacity for **Day 1 (in-person) is limited**, secure your seat!

Register Now!

Connect with us:

Follow us on LinkedIn and Twitter, browse our website.

For general inquiries, please contact Meleana Conquer (Conference Coordinator)

Kevin Lee (Co-chair)

Moe Fadaee (Co-Chair)

Chris Cochrane (Technical Program Chair)

Daniel Foster-Roman (Plenary Program Chair)

The 21st International Conference on Environmental Degradation of Materials in Nuclear Power Systems – Water Reactors

The CNS' Materials, Chemistry, and Fitness-for-Service Division was extremely pleased to be able to host ENVDEG 2023 in St. John's Newfoundland from August 6-10. Over 150 delegates, enjoyed the conference and the wonderful city of St. John's.

Stuart Medway, the Chair of ENVDEG 2023 highlighted that the purpose of the 21st Environmental Degradation meeting was to foster an exchange between plant operators, industry and academic researchers concerning materials degradation issues and solutions in the nuclear power plants of today and the future.

This meeting covered issues facing nickel base alloys, stainless steels, pressure vessel and piping steels, zirconium alloys, and other materials in nuclear power systems. Components covered included pressure boundary components, reactor vessels and internals, steam generators, fuel cladding, irradiated components, fuel storage containers, and balance of plant components and systems. Also included was a look to the future with sessions on advanced manufacturing methods, SMRs and Gen IV reactors.

Thanks also to Ontario Power Generation for being the Host Sponsor and to Chief Nuclear Engineer Mark Knutson for giving the opening plenary talk at the conference. Special thanks also to the other sponsoring organizations: Canadian Nuclear Laboratories, Dominion Engineering Inc., EPRI, KAERI, Naval Nuclear Laboratory, and Studsvik. The success of the conference was only possible with their generous sponsorship and support.

Also thanks to the Organizing Committee: Stuart Medway (Chair), David Morton (Technical Chair), Mychailo Toloczko, to the CNS MCFD Chairs, Mohammadreza Baghbanan & Daniel Gammage, and to PCO Flavia StClair who did a wonderful job coordinating the event. The CNS looks forward to the next opportunity when ENVDEG comes to Canada to be host once again



Core Business Blog

by Neil Alexander



Over the last year and a half, I have been working with the executive and council to develop a communications strategy that will get the maximum effect from the resources we can commit. While the main objective has always been to raise the public's understanding of nuclear issues a main concern has been how to respond to the volumes of misinformation that tend to circulate and which, through repetition, progressively become what the public believes to be the truth.

One thing we recognized early on is that we are all at our most persuasive when we speak to people in our own communities and that to do that everyone to needed good answers to the questions they might get. To enable people to respond effectively we have set up:

1. The core business blog. This is a blog about issues that are coming up in the media. The blogs provide the facts behind arising issues and suggest ways to talk about them. It is set up to be a dialogue so that ideas can be shared so that we can progressively learn from each other. While it is aimed at our members it is available to the public and we hope the media will begin to use it as a resource.

The core business blog can be found on the CNS website under publications, or you can click here https://www.cns-snc.ca/the-core-business-blog/ and go directly to it.

2. A series of virtual Lunch and Learns. These occasional events address key issues that are in the news and allow you to learn directly from the people involved as to what is going on. I am very much looking forward to speaking with Chris Mudrick of Bruce Power about their new build opportunity on September 6th and hope that you will be able to listen in.

We hope that providing this information to you will help you speak with people about the issues and confidently correct the things they may have read in the media.

In parallel, we wanted to directly address the misinformation at its source and so we have been responding to media

articles. This has been a bit like whack-a-mole with the added complication that hitting these moles just seems to encourage them to pop up more frequently. It turns out that they are immune to both common sense and facts! We have learned that our resources limit it us to responding to only the most egregious examples.

Instead, we have decided to try and get ahead of the story and get the facts out before the anti-nuclear campaigners can corrupt them. This should at the very least mean that people will question what the anti-nuclear campaigners say and will prevent them from having the free ride they have tended to have in the past.

We intend to do this by generating a series of "CNS statements" that will take relevant nuclear subjects and explain them in a way that helps the public understand them in appropriate context. These statements will not be like the nuclear fact sheets produced by the Canadian Nuclear Association, nor will they lobby for any particular outcome, but they will explain the subject matter in a way that is meaningful.

It's a lofty ambition and it's going to take support from our membership. To make sure we get that support we are creating a steering committee for the program (I will be announcing its members shortly). This steering committee will decide on the subjects to be addressed; help choose the people that will be on the subject specific subcommittees; and decide when the statements should be sent to the council for approval.

This approach, which includes many checks and balances, will enable us to produce robust, relevant and profoundly safe statements that will have a long shelf life.

This coming year is going to be an exciting one for the CNS communications program!

Dispatch from the Danube



The Problem of "Near-Zero"

Jeremy Whitlock July 26, 2023 Contrary to the portrayal in this summer's "Oppenheimer" (and now widespread public belief), the atomic scientists did not worry about the Trinity test igniting a fusion excursion in the atmosphere and destroying the world.

The prospect was raised early in the Manhattan Project, investigated, and discarded.

They did continue to discuss and joke about it, and the hook of the tone-deaf scientist has always been publicly tantalizing – long before "Big Bang Theory" cashed in on it.

Unfortunately, scientists typically avoid saying something won't happen, preferring instead 'near zero' probabilities – because that's how the universe works.

"Almost certainly" is as close as I think I've heard anyone get in this business.

This fundamental fact has been at the root of science's public communication problem for centuries, culminating in our cultural fear of radiation – initiated by the mushroom cloud, fuelled by the cold war, leveraged by Hollywood and other beneficiaries.

It's why most people think low levels of radiation are dangerous, and largely why we're still polluting our planet to generate electricity nearly a century after learning how to avoid this.

The public, of course, intrinsically accepts "near zero" whenever they cross the road, but for anything related to radiation this will not stand: the consequences are that abhorrent.

Thus, we see modern nuclear waste technologies – from geological repositories to near-surface disposal – vilified despite objectively representing our most sustainable industrial waste strategies.

We celebrate any announcement of a new reactor project like it's 1950 and we're being innovative in saving the planet.

We wring our hands over the release to the sea of tritiated Fukushima water, which is cleaner than the sea itself.

We live in fear of the next nuclear incident anywhere, however small, lest it cause another country like Germany to turn its back on progress.

At the end of "Oppenheimer" we are reminded that the events of 1945 did, in fact, initiate a chain reaction that may still destroy the world: the arms race.

It actually initiated another chain reaction that has killed thousands more over the decades since, and presents an equally sobering existential threat: public fear of radiation.

Sitting in the dark at the IMAX in Vienna, listening to the gasps of disbelief around me as General Groves learns that his giggling scientists are taking bets on whether the 'Gadget' will destroy New Mexico, the USA, or the world – I couldn't help but feel doomed.

A "nuclear family"

by J. Ungrin



Wikipedia defines a nuclear family as "an elementary family or conjugal family group consisting of two parents and their children (one or more). It is in contrast to a single-parent family, the larger extended family, or a family with more than two parents."

Jim Ungrin, Artifacts Chair of the Society for the Preservation of Canada's Nuclear Heritage Inc. (SPCNHI) recently learned from his neighbour, Terry Cooper, that the "nuclear family" can have a much different meaning for the nuclear industry.

The story begins with Allan Cooper who joined Atomic Energy of Canada Limited (AECL) in Chalk River as an engineer in 1964. He later left AECL and joined Ontario Hydro where he worked at Nuclear Power Demonstration (NPD) as a Licenced Shift Manager until it was shut down in 1987. He then rejoined AECL and eventually, post retirement, worked as an engineer at Cernavoda in Romania, where he was part of the Canadian construction/commissioning team for the CANDU reactors being built there.

Allan and his wife Ruby had four sons, Terry, Dave, John and Brent. They all caught their father's enthusiasm for the nuclear industry and found careers in it. Terry became an Authorized Nuclear Operator (ANO) (formerly known as First Operator) and worked for many years at Bruce B Nuclear Generating Station (NGS); Dave also became an ANO at Bruce B NGS; John became a Supervising Nuclear Operator at Bruce B NGS. Finally, Brent, who started out as an operator at Bruce A NGS, moved on to Pickering NGS, then on to MAPLE at CRNL where he became a Licenced Operator and, finally, he joined the Canadian Nuclear Safety Commission (CNSC) and served as a CNSC Inspector at Chalk River.

A remarkable family story. However, it does not end there. The enthusiasm for things nuclear spread to the third generation of the Cooper family. Terry's son, Allan (named in honour of his grandfather), became an ANO and Shift Manager at Pickering NGS, while another son, Kurtis, has become a Mechanical Supervisor at Bruce A NGS. Meanwhile, John's son, Michael, followed the Cooper family tradition and became a Control Technician at Bruce B NGS.

The Cooper family involvement in things nuclear was not a male-only affair. Dave Cooper's daughter, Jenna, became an ANO at the Darlington NGS and then moved on to Bruce NGS, where she became a Shift Manager.

The success of the Canadian nuclear industry has been a story of many people and many families. The Cooper family is the only known family with three generations licenced to operate a nuclear facility in Canada. Their contributions have been large enough that perhaps we should try to convince Wikipedia to list a second meaning for their definition of a "nuclear family."

SPCNHI continues to welcome contributions about the nuclear industry. Contributions are most often centered on technical successes or events but, as this anecdote illustrates, there are many stories about the people that need

to be told. Please send your always-welcome hard-copy contributions to the Society for the Preservation of Canada's Nuclear Heritage Inc., Box 441, Deep River, ON, K0J 1P0 and digital ones to info@nuclearheritage.ca. If you are visiting in the Deep River area, please contact us to arrange a tour of our museum; you can also visit us with a virtual museum tour at nuclearheritage.com

Why Should We Build Small Modular Reactors in Canada?

Rehaan Ghimire

O'Neill Collegiate and Vocational Institute [First Place Winner of the 2023 Essay Contest]

- 1. Introduction
- 1.1 Energy Security and Nuclear Power

Energy is one of the most important factors affecting our quality of life. With a global population of 8 billion by the end of 2022, ensuring energy security and decarbonizing electricity generation has become a pressing concern. Our current electricity generation systems generate vast amounts of greenhouse gases and other pollutants, contributing to environmental degradation and accelerating climate change—a real existential threat for humanity [1]. As a high school student, I am fully aware of the current energy crisis, especially in Asia and Africa, where substantial populations reside. It is imperative that we focus on reliable, base load power from clean energy sources to address this issue and decarbonize the electricity generation and auto industry. In my school and through various media channels, I have learned about nuclear energy and its potential benefits for energy security and decarbonization through the use of small modular reactors (SMRs) [2,3]. Nuclear energy, which is generated by the fission (i.e., splitting atoms and releasing energy) of uranium or plutonium, could prove to be a viable solution to tackle these challenges in both developing and developed countries. Canada is a Tier 1 nuclear country, possessing full capability in nuclear technology and a well-established supply chain. Approximately 60% of Ontario's electricity comes from nuclear power thanks to the homegrown CANDU (CANadian Deuterium Uranium) nuclear technology, which has been successfully utilized in Canada (mainly in Ontario) and other countries like Argentina, China, India, Pakistan, Romania, and South Korea since the 1970s. Furthermore, Canada boasts a long history of operating nuclear reactors for electricity generation, including research and test reactors [4]. However, conventional reactors are relatively bigger, more expensive, and take a significant amount of time to construct. As a result, big nuclear reactors are less competitive (in terms of construction time and costs) compared to other energy sources, such as gas-fired or coal-fired power plants [5].

1.2 Small Modular Reactors in Canada

To make nuclear power more competitive than other power production methods and ensure future energy security, a small modular reactor (SMR) can be constructed easily within a short time frame. Their lower capital investment and modular design can substantially increase their adoption worldwide. While the primary working conditions of both large and small reactors are the same, SMRs are specifically designed to produce less power (i.e., between 10 and 300 Megawatts Electrical (MWeI)), featuring small size, simplicity, modular design (i.e., factory manufacture), and relatively short construction times [5,6]. Consequently, these reactors can be deployed quickly, even in remote locations such as the Canadian Arctic. Canada has recently launched its SMR road map, giving top

priority to this emerging nuclear technology. It is considered the 'next wave of nuclear innovation' and has the potential for decarbonization of electricity generation, leading to the development of this new technology [7,8]. Moreover, Ontario, Saskatchewan, New Brunswick, and Alberta have signed a memorandum of understanding (MOU) to collaborate and leverage the advantages of this emerging nuclear technology. Therefore, SMRs are receiving top priority from different levels of government and provinces in Canada [2,3].

2. We Should Build SMRs in Canada for the Following Reasons:

2.1 Energy Security and Decarbonizing Electricity Generation:

Still, different provinces such as Saskatchewan, Alberta, and the Arctic territories' primary source for electricity generation is fossil fuels. On the other hand, Ontario relies significantly on nuclear energy (i.e., 60% electricity of Ontario comes from nuclear) and 36% in New Brunswick (contributing to about 15% of Canada's total electricity) [4,9]. However, some aging reactors will need to be decommissioned in the next decade, creating a demand for clean energy alternatives (i.e., SMRs) to replace these closed or decommissioned nuclear reactors in Ontario. Additionally, significant reductions in carbon emissions are necessary in other provinces and territories to achieve our net-zero targets by 2050 [7]. Hence, building SMRs is imperative to decarbonize electricity generation and meet our net-zero targets.

2.2 Remote and Mining Community Energy Needs and Decarbonization:

Remote communities in Canada, including those in the Arctic, depend on diesel generators for their electricity needs. The transportation of diesel fuel and generators is challenging in those locations [7,8]. As a result, people living in Nunavut (Canada) are paying more than five times the amount for their electricity compared to those in southern Canada. SMR can replace diesel generators and provide electricity at a significantly lower price. Additionally, remote mining and resource extraction companies can utilize this clean technology for reliable energy and reduce emissions [10].

2.3 Economic Benefit - International Markets:

The potential global market for SMRs is estimated to reach \$150 billion annually by 2040. Canada can capitalize on this vast SMR market by successfully constructing and demonstrating grid-scale SMRs [7]. Canada has already exported its homegrown CANDU technology and successfully demonstrated its capability to export nuclear technology. CANDU technology is highly regarded for its energy production and safety, as there have been no nuclear incidents reported from CANDU nuclear power plants until now. Therefore, we can also leverage our nuclear success to develop CANDU SMRs and other home grown SMR technologies [4].

2.4 Flexibility:

One of the unique features of SMRs is their small sizes, modular design and factory manufacture. So, if a small population needs limited power (for instance 300 MW_{el} or less), in that case, we can construct SMRs according to their needs. Over time, if the population increases or industries are established and more electricity is needed, we can add new modules to the existing ones. Since all the infrastructures are the same, adding new modules would be cheaper and easier than constructing new SMRs [5].

2.5 Cost:

One of the most concerning factors for the success of nuclear power is its construction and operation costs. Conventional reactors (>1000 MW_{el}) require ten billion dollars and sometimes go over budget due to inflation over time. However, since SMRs are small, the initial cost of building the plant is much less than constructing a much

more complex, non-modular, sizeable nuclear plant. Being relatively cheaper than a large reactor, SMRs present a smaller-risk venture for power companies compared to large nuclear power plants [5,7].

2.6 Safety and Security:

Regarding safety, SMRs are inherently safe reactors with passive safety systems, such as natural circulation (i.e., gravity-driven), which reduces the risk of severe accidents. Due to automated techniques and small size, these reactors can run with little supervision, resulting in cost savings for operations. Additionally, due to inherent safety features, most SMRs have good potential for locating near population centers [4], thereby reducing electricity transport costs and ultimately lowering the cost to customers [5,7].

2.7 Jobs:

In Canada, the nuclear sector contributes \$6 billion annually, providing 30,000 direct and indirect jobs. It is expected that SMRs will create an additional 6,000 direct and indirect jobs per year between 2030 and 2040, particularly in Science, Technology, Engineering, and Mathematics (STEM) fields. Consequently, the development of SMRs can be the cornerstone for economic prosperity in Canada [7].

2.8 Technological Advancements:

As Canada is already a leading nuclear nation, investments in research and development (R&D) for SMR technology development, demonstration projects, and finally, constructing a grid-scale SMRs can further enhance Canada's capabilities and nuclear technology competitiveness in the world nuclear reactor design arena [7].

3. Conclusions

Due to its small size, modular design, high safety, and low costs, the SMR can revive nuclear energy for electricity production and help achieve net zero by 2050. Additionally, it can accelerate Canada's technological advancement, nuclear leadership on the world stage, and job creation. Therefore, I urge all levels of government to build SMRs and take advantage of this clean technology.

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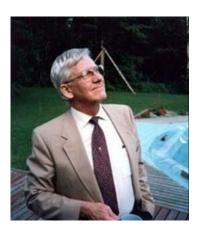
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HELGI "VERN" AUSTMAN (1930 – 2023)



It is with sadness that we report the passing of Helgi "Vern" Austman. On Sunday, July 16th, 2023, Vern succumbed after a three-year struggle with Parkinson's disease. All his family were at his side through his last few days, in his home at Trillium Court in Kincardine, Ontario.

Vern was born in the Sveinbjornson family farm house, in Elfros, Saskatchewan, on July 28th, 1930, the son of Sigurjon (Sam) Austman and Gudny Lovisa (Louise) Sveinbjornson. He grew up in Calgary, Alberta, along with his five siblings: Doreen, Karin, Myrna, Diana and Neil.

Vern attended the engineering program at the University of Alberta in Edmonton before embarking on an eventful career lasting over 40 years in Canada's nuclear power program. He was involved in the commissioning of many of Canada's CANDU reactors, starting with the very first at Rolphton, Ontario, and culminating with Ontario's most recent at Darlington. He served as the plant manager at both Bruce NGS A and Darlington NGS. He also served as commissioning manager for a pair of CANDU reactors in Rajasthan, India.

Vern married the love of his life, Frances (née Gardener), on July 19th, 1952, in Calgary. Together they raised four children, Daniel (Susan), Gord (Margie), Sam (the late Katherine), and Kristin. All three sons carried on in their father's footsteps in the nuclear power industry. Kristin carried on her father's love of education, self-improvement, and helping others.

Vern will be dearly missed also by his siblings Karin (Dennis), Myrna (Mike), Diana and Neil (Brenda) and by many grandchildren and great-grandchildren.

Vern was predeceased by his parents, sister, Doreen, daughter-in-law, Katherine and great-grandchildren, Jack, Josephine and Steven.

Besides his family and his work, Vern's greatest passion was for genealogical research, and he was fiercely proud of his entirely Icelandic heritage. He also delved deeply into studies of physics and geology, the latter no doubt inspired partly by the spectacularly unique geology of his homeland.

Vern's family extends heartfelt thanks to all the staff in Long Term Care at Trillium Court and to Dr. Gurbin. Their kindness and hard work made his last year as bearable as possible under the circumstances. (Dr. Gurbin was also our family doctor for a couple of years in Kincardine in the 1960's!) Vern also received excellent care at Brucelea Haven in Walkerton, and at the Chesley and Kincardine Hospitals.

A celebration to honour Vern's life will be held at Trillium Court, 550 Philip Place, Kincardine on Thursday, August 10th, 2023 from 2:00 to 4:00 p.m.

If you wish to remember Vern in a substantial way, please do so with a donation to your community hospital or to a charity of your choice.

Dr. Derek H. Lister, C.Eng., Professor Emeritus, Member of the Order of Canada (1939 – 2023)



It is with sadness that we report of the passing of Dr. Derek H. Lister, former NSERC Senior Industrial Research Chair in Nuclear Engineering, Department Chair of Chemical Engineering and Professor Emeritus (2006). Derek passed away peacefully on July 12th, 2023 at the Ruddy-Shenkman Hospice in Kanata, Ontario following a short battle with brain cancer.

After a successful career in the nuclear industry that began in 1962 with the Atomic Power Division of the English Electric Co. Ltd in England, followed by 23 years at Atomic Energy of Canada Ltd, Chalk River, Derek moved to the University of New Brunswick in 1992 to take up the NSERC/NB Power/AECL Industrial Research Chair in Nuclear Engineering. The internationally renowned expertise Derek brought to UNB from his career at AECL encompassed the fields of chemistry and corrosion in nuclear reactor coolant systems and he quickly established a formidable research group and laboratory focused on three main areas: radioactivity and mass transport in primary reactor coolants; flow-accelerated corrosion (FAC) in primary and secondary coolant systems; and fouling under heat-exchange conditions.

Following his "retirement" in 2005, Derek was quickly awarded Professor Emeritus status (2006) where he continued his research activities until he could no more. In recent years, in addition to the key areas highlighted above, Derek had expanded R&D activities into related fields including studying the impact of film-forming substances on corrosion and the mechanisms of their action - a new area of coolant chemistry and control gaining significant interest internationally. Over his 30+ years at UNB, Derek supervised over 100 graduate students (PhD's and MSc's), 9 Post-Doctoral Fellows and hosted 6 visiting Research Scientists. He published extensively, producing over 50 peer-reviewed journal articles, numerous book chapters and endless contributions in conference proceedings, many as invited keynote speaker, all in addition to the scores of commercial reports produced for industry collaborators.

Throughout his career, Derek was a key technical resource lending his expertise to numerous organizations. He has served on the scientific advisory boards for Atomic Energy of Canada Ltd, the Nuclear Waste Management Organization, the University Network for Excellence in Nuclear Engineering (UNENE) and UNB's own Centre for Nuclear Energy Research (CNER). Internationally, Derek was a core member of Nuclear Plant Chemistry (NPC) conference series organizing committee and a long-standing and productive member of the Power Cycle Chemistry Working Group of the International Association for the Properties of Water and Steam (IAPWS). As a testament to his impact and career, on December 27, 2019, Derek was appointed as a Member of the Order of Canada, the second highest honour of merit awarded to Canadian citizens, "For his contributions to nuclear energy research and improvements to occupational safety."

Derek was a respected and long-standing colleague, scientist, teacher and mentor throughout his career and will be missed. In accordance with Derek's final wishes, in lieu of a public memorial service, his family will be holding a private memorial dinner in his honour at some date in the future.

Join or Renew CNS Membership

Reasons to become a member of the CNS

- Take advantage of many excellent opportunities to grow professionally by meeting and networking with colleagues in Canada and internationally.
- Many volunteer positions are available which offer opportunities to grow personally by learning and networking with others in Canada's nuclear field.
- · Receive special member registration fees to CNS Conferences and Courses.
- · Membership is free for students and discounted rates are available for retirees and recent graduates!
- · Receive early notices by e-mail of many other items of interest

Membership fees:

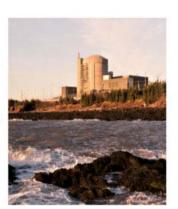
- \$92.00 for regular members, and \$86.40 for each additional year
- \$54.10 for retiree members, and \$48.40 for each additional year
- \$31.00 for student members from outside Canada
- Free for Canadian students! As part of the registration process, you will be asked to confirm your full-time-student status (student card or other institution documents) in the current year. Once that confirmation is received, your membership will be approved.

Note: to be eligible for the student fee for CNS conferences and courses, you must be a CNS student member in good standing.



The Canadian Nuclear Society Head Office:

998 Bloor St W., #501 Toronto, ON M6H 1L0



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Kelly Lush

From: MPAC <intouch@mpac.ca>
Sent: August 31, 2023 10:05 AM

To: Kelly Lush

Subject: August 2023 - InTouch

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<u>La version française</u> August 2023



Important updates

Province-wide assessment update postponed



On August 16, the Ontario government filed a regulation to amend the *Assessment Act*, extending the postponement of a province-wide reassessment through the end of the 2021-2024

assessment cycle. This means that property assessments for the 2023 and 2024 property tax years will continue to be based on fully phased-in January 1, 2016 current values.

While we wait for a new assessment date, MPAC continues to maintain an inventory of all properties and account for changes that happen each year in every property sector across the province. The ongoing postponement does

not change the work we do to maintain our extensive property database and annual assessment rolls.

The government also announced that it will conduct a review of Ontario's property assessment and taxation system. While MPAC is not responsible for setting tax rates or collecting property taxes, we welcome the opportunity to work with the Province to ensure the property assessment process is optimal for property owners and municipalities.

MPAC remains in a strong position to deliver the next province-wide reassessment due to the work that we undertake every day to keep property assessment records accurate and property market data current.

If you have any questions or concerns, please reach out to <u>your local</u> <u>Municipal and Stakeholder Relations Account Manager.</u>

Supporting municipalities with the delivery of the Q2 New Assessment Forecast

Through the Q2 new assessment forecast update delivered to municipal partners at the end of July, MPAC has identified over \$41.5 billion in available new assessment across the province.

While this is a slight decrease from the Q1 New Assessment forecast which projected \$42 billion at the end of April, the change can be attributed to delays in residential and condo new construction occurring in some market areas where rising interest rates and higher material costs are impacting development timelines.

"Providing insight into anticipated growth offers municipalities essential information to anticipate revenue and support their budget and tax planning," says Carm Lipsi, MPAC's Vice-President, Valuation and Customer Relations and COO. "We are ahead of schedule in delivering the most up-to-date information and look forward to continuing to offer valuable services and other support to municipalities across the province."

As of August 14, MPAC has captured \$27 billion of new assessment value in 2023, representing 65 per cent of the most recent annual forecast, and 90% of this new assessment was completed within one year of occupancy.

For questions about the new assessment forecasting process, reach out to your local MSR Account Manager.

New Building Permit Dashboard launches in Municipal Connect



We are pleased to announce that our new Building Permit Dashboard in Municipal Connect is now live. Created exclusively for municipal staff members, Municipal Connect is your

primary source for assessment data and information.

Designed to provide greater insight on new assessments, the new dashboard enables you to review all building permits MPAC has received from your municipality.

Within the Building Permit Dashboard, the 'overview' tab allows you to filter inprogress permit information by:

- Work Description
- Property Series
- Property Type

The 'overview' tab also includes information on the total number of permits closed this year and permit submissions. There are additional 'status' filters, allowing you to sort building permits by plans received, final and occupancy status.

The dashboard helps to improve transparency by providing a better understanding of the building permit's journey between your municipality and MPAC.

To familiarize yourself with the new dashboard, check out our <u>online</u> <u>tutorial</u> or reach out to <u>your local Account Manager</u> for an overview session.

MPAC's 2022 Post-Enumeration Report is now available

In 2022, MPAC delivered our final Preliminary List of Electors (PLE) to every municipality, District Social Services Administration Board and electing school board in Ontario.



We are pleased to report that through the

combined efforts of municipalities, Elections Ontario and MPAC, with support from other stakeholders, the 2022 PLE grew by almost 1.2 million electors. This includes data coming from Elections Ontario following the June provincial elections, as well as <a href="wortended-voterland-super-

As we implement legislated changes that will transfer responsibility for the PLE to Elections Ontario in 2024, we would like to thank our Elections Working Group members for their support and insightful contributions to the 2022 enumeration process.

You can read more about our comprehensive enumeration strategy and our effort to support municipalities through the process in the full report here.

Connecting at this year's AMO Conference

MPAC was pleased to attend this year's AMO Conference in London, Ontario, as both an exhibitor and presenter. Over 2,500 delegates from across the province joined together for the three day event, which featured more than 60 speakers, sessions and workshops and covered a broad scope of topics important to municipalities today.

For our annual MPAC update Nicole McNeill, President and Chief Administrative Officer was joined by Alan Spacek, Chair, MPAC Board of Directors and Carmelo Lipsi, Vice-President and Chief Operating Officer for a fulsome presentation. This well-attended session featured highlights of our recent work, details of our work to keep Ontario's property database current, the tools we have to support property owners and municipalities, and some property insights.

Nicole McNeill and Carm Lipsi will be presenting MPAC's municipal update at our next webinar on September 7. Registration information can be found below.



READ THE FULL STORY



MPAC's role in the property tax and assessment system – a municipal update

With the further postponement of a province-wide reassessment, MPAC continues to focus on supporting the evolving needs of municipalities and

property owners by championing the modernization of our products and services.

Join MPAC's President and CAO, Nicole McNeill, and Vice-President and COO, Carmelo Lipsi, to hear our annual municipal update and learn more about:

- Our work to keep Ontario's property database current.
- Tools to empower property owners.
- Recent operational highlights and property insights.
- Our role in the property tax and assessment system.

There will be time provided for questions.

Date: Thursday, September 7, 2023

Time: 1:00 to 2:00 p.m. EDT

REGISTER NOW

To view recordings of all past webinars, visit <u>mpac.ca</u> or on our <u>YouTube</u> <u>Channel</u>.



Look for us in September and stop by to say hello!

- September 6 to 8: Ontario East Municipal Conference (OEMC), Ottawa
- September 10 to 13: Ontario Municipal Tax and Revenue Association (OMTRA), Niagara Falls
- September 19 to 22: Municipal Finance Officers Association (MFOA),
 Niagara Falls
- September 19 to 23: International Plowing Match (IPM), Bowling Green
- September 24 to 27: Ontario Building Officials Association (OBOA),
 Niagara Falls

We invite you to get to know us!

Every municipality has their own dedicated account management team at MPAC. They are the best resource for municipal staff and elected officials should your municipality have any questions related to MPAC and our work. Reach out to <u>your local Municipal and Stakeholder Relations Account Manager</u> with questions or to learn more.













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Kelly Lush

From: Community Living Kincardine & District <aswan@clkd.ca>

Sent: September 7, 2023 10:00 AM

To: Kelly Lush

Subject: CLKD's September 2023 newsletter is here!





Hello!

My name is Callum Thompson and I am 13 years old. I am a person with autism and my family has been supported by Community Living since I was about 4 years old. Lately, I have been enjoying hanging out and meeting friends through Community Living's Youth Connections summer program. We get to do all kinds of stuff like explore lighthouses, cook and volunteer at different places like the fish hatchery and the Bruce Botanical Food Gardens in Ripley.

I'm lucky to have all of these fun opportunities this summer as I had a really good winter as well! Last October, my family and I set out for a six-month sabbatical to backpack around Australia and go to school for a couple of months in New Zealand. We started the trip by flying into Melbourne, Australia where we stayed in a family room at a youth hostel.

After a few days of exploring Melbourne, we rented a campervan. That's where the adventure really began! The van was a Toyota Siena (called a Toyota Estima in Australia) which had a double bed and a roof tent. Good thing we each only packed a carry on each as there wasn't very much space!



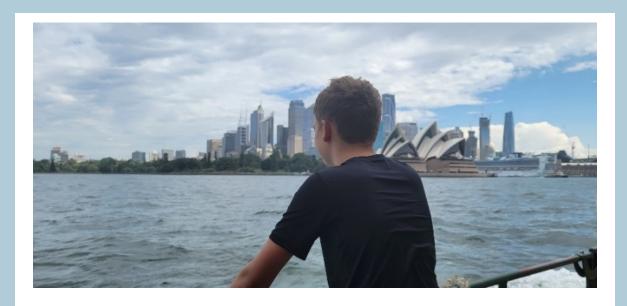


With the campervan, we were able to meet other travelers at campgrounds. Our first night camping, we met an Australian family who had sold their property, bought a travel trailer and were camping their way around the circumphrence of Australia over the course of a year. We camped along the Great Ocean Road and got to see the Twelve Apostles. They were amazing!





After 5 awesome nights on the Great Ocean Road, we flew to Sydney and I got to see the Opera House!



Since I am on the autism spectrum, I get a little overwhelmed with too much noise and the hustle and bustle of cities. While I enjoyed seeing the Sydney Opera House, Harbour Bridge and Taronga Zoo, I was happy when we flew up to Cairns from Sydney and got into quieter Queensland.

We rented another campervan which we had for 2.5 months. That van took us everywhere! We first went up to Cape Tribulation where I got to snorkel on the Great Barrier Reef.







After the Great Barrier Reef, we worked our way south to the Whitsundays; they were beautiful!

We continued onto the Sunshine Coast where we went to the Australia Zoo. It's owned by the late Steve Irwin's family and they have done a great job with it. His family works there and we even got to see his son, Robert, do the crocodile show!





My family and I got to spend three weeks around Christmas and New Year around the Coffs Harbour area. This was great as we knew a family from Kincardine there and got to spend lots of time with them.

On January 5th, my family and I flew over to New Zealand. We spent two weeks traveling around North Island. I got to explore Auckland and Hobbiton!





I also got to explore the geothermal pools!



We then took the ferry to South Island where I got to see fault lines, take a boat cruise with dolphins in Milford Sound and see the famous Wanaka tree.



This is Lake Tekapo. I loved it because of its bright blue glacier water. My brother and I called it Lake Gatorade since the blue was as bright as Gatorade.

After we explored South Island for a couple of weeks, we settled into Diamond Harbour for two months. My whole family loved Diamond Harbour. It is a small community of around 1,500 people and I got to go to school there for 2 months! The school was so welcoming.

I was in grade 7 when I left KDSS in October but I was in grade 8 at Diamond Harbour School because they start their school year in February!



We flew back to Canada in April. It was a long flight home but we did manage to squeeze in a 15-hour whirlwind layover in San Francisco.





I returned to my grade 7 class at KDSS when I got back in April. I was excited to see my friends again and share stories of my adventure.

Kathy's Equestrian Challenge for Breast Cancer











For many years Kathy's horse Cricket has been happily boarded at High Hopes Equestrian, a farm in Holyrood owned by Amy Schertzberg. They have been doing all that they can to show their support for Kathy during her battle against breast cancer and, on August 27th, they hosted a best in show competition with all proceeds going to the cancer charity of Kathy's choice. The theme of the day was Pink and the decorations and outfits where definitely on point!

Kathy was excited to not only ride in the show, but also to be part of the judging process.

Kathy said "After 2 days of riding my muscles are screaming! It was a really good day and my doggie (Shylah) is completely worn out; oh what fun!"

Kathy was so happy to have several Facebook shout-outs from the weekend participants all giving her their best wishes for her upcoming surgery.

A beautiful show of support from her Equestrian community!

Jen's Summertime Adventures



Jen was excited to show photos and share about her trip to African Lion Safari this summer with her dad and Anne. Jen told us all about the animals they saw as they travelled through the safari on the tour bus including: "a lion, monkeys, giraffes, elephants, leopards, zebras, ostriches, birds, rinos and deer." Jen pointed to a picture of a tortoise and mentioned that it

was her favourite animal to see. She is looking froward to going back again and next time, she'd like to ride an elephant!

Jen also visited the Butterfly Conservatory this summer. "Wow!" she said as she flipped through the photos of all the beautiful butterflies. She pointed to a picture of a butterfly on her sweater and said "blue" and "arm" to tell us that a blue butterfly had landed right on her arm and visited a while before flying off. Jen gave two thumbs-up when we asked if she would be going again.

Celebrating Local Partnerships



The Good food box is a collective buying program that provides a grocery bin of fresh seasonal produce at a low price. It encourages healthier eating and promotes fresh fruits and vegetables. Produce is purchased in bulk at wholesale prices and the savings are passed on to participants.

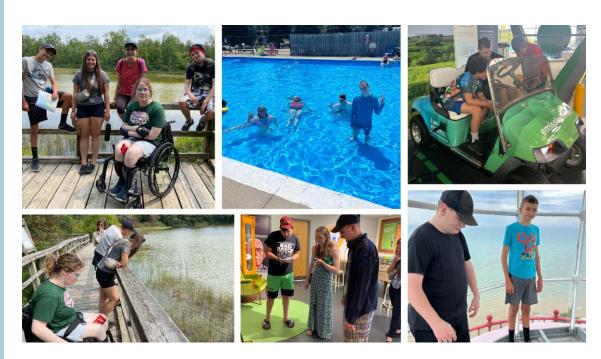
Sarah and Alvin make sure to get their Good Food box every month and they are always really happy with the variety of produce available and the amount that they get for the super low price of \$22! Some baskets can even come at no cost at all if circumstances warrant.

If you are interested in getting one for yourself, and Alvin highly recommends that you do, you can pre-order your basket at the Local 2222 Carpenters Union and pick up your basket at the Knox Presbyterian Church from 9:30am till noon and the 4th Thursday of every month.

They also set up a pick up location at 50 Park St in Ripley to make the fresh produce even more accessible to as many people as possible.

For more information you can check out their website: https://unitedwayofbrucegrey.com/good-food-box

Youth Connections 2023 Wraps Up!



"Well that sure was a fun summer" was the general consensus from youth during our last week of Youth Connections. This summer we tackled lots of fun activities and learning experiences.

We regularly visited the Bruce Botanical Food Gardens, the Kincardine Fish Hatchery, and Allies for Alley Catz to build pre-employment skills through these volunteering experiences. The youth loved harvesting flowers and fresh produce, and were able to bring some of the fruits of their labour home to their families.

They enjoyed learning how to care for, and build rapport with the cats at Allies for Alley Catz; "Checkers is the cutest kitten ever!" said Matthew, and Jackson loved snuggling with all the cats.

We also had lots of highlights on our day trips this summer. Camp Kintail, or, "the best place ever!" according to Callum, provided opportunities for the youth to try a variety of activities, such as: archery, rock climbing, crafts, and "the coolest slide ever!" according to David. We visited MacGregor Point Provincial Park, where "we had the best tour guide!" (Serenity said). We walked around the Huron Fringe boardwalk where we learned about turtles, frogs, insects and the Balsam Fir "tree trick".

We went to the Huron Historic Museum and Gaol, where Teegan found it fascinating that "real prisoners used to live here!" We saw different cells and prison rooms, and lots of cool exhibits at the museum. We also went bowling while we were in Goderich and, as Ryan would tell you, "I'm very good at getting strikes!" (he sure was!)

At Family Funland, we went mini golfing and some youth tried the go karts. Dylan said "They went super fast, but I'm glad I gave it a shot!" We also visited the Bruce County Museum in Southampton where we listened to a cultural demonstration after which Tanya said, "that was a cool story about Turtle Island!"

On another trip, we climbed the 114 stairs to the top of the Point Clark Lighthouse, where, according to Caty, "it is sure easy to lose a shoe, but it was a great view at the top!" We went swimming in an outdoor pool in Lucknow, which, according to Luke, "was way warmer than the lake!" We also enjoyed some recreational classes, such as Yoga, Art, Fitness, cooking, games and hikes.

These experiences gave youth opportunities to try new things, explore Kincardine, and surrounding communities, and develop new friendships along the way.

Overall, I had such a great summer getting to know lots of wonderful and talented youth and hope they enjoyed our activities as much as I did. Youth Connections is a wonderful program that just keeps growing year after year. My experience working with Community Living Kincardine & District has been nothing but wonderful. Everyone in the CLKD office welcomed me with open arms and helped me to ensure that Youth Connections ran smoothly. Thank you for a fantastic summer!

- Abby, Youth Connections Leader 2023

Upcoming Events & Activities



National Disability Employment Awareness Month

October

The purpose of Disability Employment Awareness Month is to promote employment inclusion for people who experience disability and to celebrate the many and varied contributions of workers with disabilities.

Follow us on **facebook** or **Instagram** as we share employment stories and information for employers and employees.

To learn more about CLKD's services and events, visit our website!









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If this email has been forwarded to you, please consider subscribing to the Community Living Kincardine and District monthly e-newsletter by **signing up here**.

Our mailing address is:

Community Living Kincardine & District 286 Lambton St. Kincardine, On N2Z 2Z3 Canada

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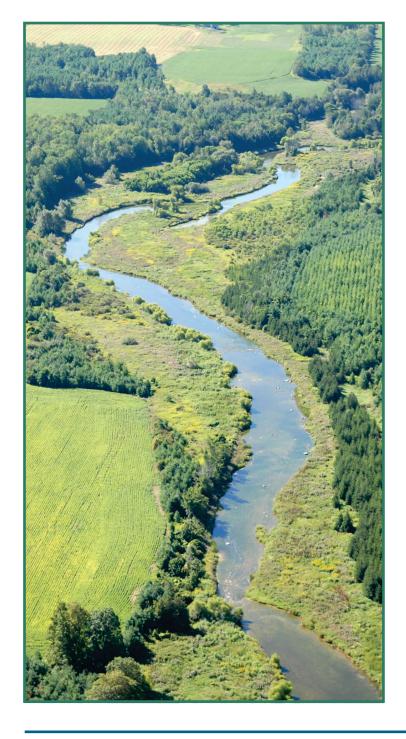
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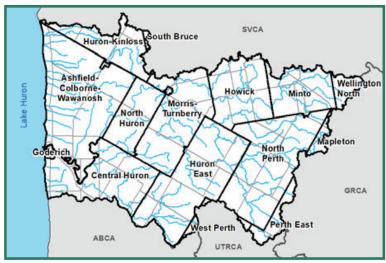




Working for a healthy environment!

UPDATE REPORT





MISSION

Maitland Conservation is working to protect and enhance water, forests and soils in the Maitland and Nine Mile River watersheds.

BACKGROUND

Maitland Conservation is jointly governed by its member municipalities.

Conservation Authorities are established by the provincial government at the request of municipalities. The activities of Maitland Conservation are driven by municipalities, landowners and community partners.

We are committed to providing effective community-based conservation services in a cost efficient manner.

519 335 3557 | maitland@mvca.on.ca | mvca.on.ca

1. FLOOD and EROSION SAFETY SERVICES

Purpose:

To help municipalities reduce the risk to life and property in areas prone to flooding and erosion.

To conserve features and functions of the river system and Lake Huron shoreline.

- Monitoring of weather and gauge data 24 hours a day,
 7 days a week. Messages issued for 6 storm events.
- Consultant selected for North Perth floodplain mapping project.
- Molesworth and Harriston rain gauge stations relocated.

Land Use Planning Support & CA Development, Interference & Alteration Regulations

Purpose:

To ensure that development does not increase risk for flooding or erosion and protects the river and shoreline.

Staff continue to respond to an elevated number of inquiries relating to development, often in unsafe areas. To date this year 85 permissions have been issued, 10 drain reviews completed, comments provided on 36 planning inquiries and 145 additional development and planning inquiries dealt with.

2. CONSERVATION AREAS

Maitland Conservation owns 28 properties encompassing 1,862 hectares. Key priorities include:

- showcasing best management practices on conservation lands,
- ensuring properties are safe for public use,
- dealing with aging and surplus infrastructure.

Wawanosh Valley - demolition of barn and shed structures set for October. Nine bat houses constructed and installed. Bat survey work being undertaken by the Toronto Zoo.

Brussels - severance conditionally approved. Well at site decommissioned.

Turnberry Floodplain - building demolition completed. **Galbraith** - a lease agreement with the Town of North Perth has been finalized.

Saratoga & Stapleton - gates and barrier posts installed to restrict ATV access.

Falls Reserve - camping season in full swing. Accessibility renovations to day-use area washroom facility underway. **Wawanosh Park** - 50 large stock trees planted to buffer pond.

Coastal Resiliency Project



Project to update to Shoreline Hazard Mapping is nearing completion. This project has provided an improved understanding of the state of the shoreline and coastal processes. The mapping is posted on the Maitland Conservation website at myca.on.ca.

Two public workshops are being held this summer to discuss the challenges facing the shoreline and to build an understanding of the values of shoreline stakeholders. The workshops are part of an initiative to explore ways to improve the resiliency of the coast to the changing climate. The goal is to connect with the shoreline community to consider what a healthier, less hazardous shoreline could look like in the future.









3. WATERSHED STEWARDSHIP SERVICES

Purpose:

To work with municipalities, landowners and partners to:

- a) implement stewardship practices that help to keep soil and nutrients on the land and out of watercourses,
- b) improve the health of the river system.

Stewardship Activities

- 43 tree planting projects completed and inspected.
- 26,225 trees planted by landowners and Maitland Conservation's tree planting services.
- 51 acres of river valley and floodplain land restored through planting. Three km of windbreaks and four km of stream buffers planted.
- Tree survival assessments completed at project sites.
- 70 new applications initiated and approved through the Huron Clean Water Project and Wellington Rural Water Quality Program.
- Two Environment and Climate Change Canada funded dam removal projects underway.

Rural Stormwater Management

- Two erosion control projects initiated
- Healthy Lake Huron municipal drain tour held for engineers and drainage superintendents
- Over 100 spring cover crop residue checks completed for the Huron Clean Water Project and Cover Crop Leaders Program. Working with 67 landowners on cover crop projects involving over 6,600 acres.

Healthy Watersheds Programming

 40 landowners participated in three focus groups.
 Peer-to-peer cover crop mentoring initiative underway.

Watershed Health Assessment

Purpose:

To assess the health of forests and rivers.

A three-year intensive study of forest health was completed this spring. Key outcomes include:

- Local forest health is at risk.
- Our forests are losing resiliency.
- 20 % of standing trees were found to be dead during survey. This level of mortality will substantially lower the overall health and resilience of our remaining forests.
- The key disturbances in the woods are:
 - Invasive pests like Emerald Ash Borer and Beech Bark Disease
 - Invasive plants like buckthorn, garlic mustard and periwinkle
 - Woodlot management and wind events (climate change).

The next step is to work with our partners to evaluate how we manage and steward local forests to determine how we can improve their health.

Staff are also in the process of developing a framework to undertake a health assessment of watercourses in the Maitland and Nine Mile River

4. CORPORATE SERVICES

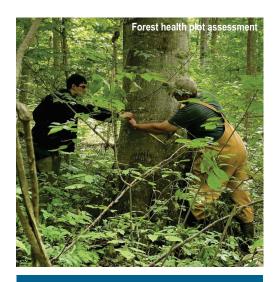
 To date 14 member municipalities have signed a Memorandum of Understanding supporting Maitland Conservation's services and programs for the next four years. Staff are currently working with the Municipality of Wellington North to have the final MOU signed. Wellington North has indicated they would like to review the MOU's from their three Conservation Authority partners at the same time.

5. DRINKING WATER SOURCE **PROTECTION**

Purpose:

To assist municipalities to protect sources of drinking water.

- Source Protection Committee met in March to review Annual DWSP Progress Report and finalize updates to the Source Protection Plans.
- Updated Source Protection Plans were submitted to the province in for approval per section 36, Clean Water Act. No concerns have been noted to date.



ADAPTING to the IMPACTS of a CHANGING CLIMATE

Carbon Footprint Initiative Maitland Conservation is collaborating with local businesses, municipalities and counties to reduce the use of fossil fuels and to sequester carbon by planting trees and shrubs. At our Conservation Areas tree planting efforts continue. This spring 1,500 seedlings were planting at Wawanosh Valley Conservation Area. We're also continuing to transition the motor pool to electric vehicles.

