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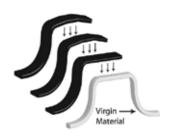
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American Water Works Association
Atlantic Canada Section



Atlantic Canada Water & Wastewater Association

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On the cover:

Port in Charlottetown, PEI. | dreamstime.com



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Be prepared

hope that everyone had a great summer and had some time to unwind from work with family and friends during this beautiful summer, even though it was a slow start in Newfoundland. This summer was not without its challenges: the extreme heat caused extra demand on our water treatment and distribution systems. The heat also contributed to some unwanted events such as wildfires and extreme rainfall which then caused flooding and property damage. These events highlight the need to be prepared and to ensure that water and sewer

This summer was not without its challenges; the extreme heat caused extra demand on our water treatment and distribution systems."

systems have the capacity to accommodate a range of conditions from extreme dry and heat events to intense rain, snow, and wind events.

This ties nicely to the theme of this year's ACWWA Annual Conference – "Building Resiliency, Protecting the Communities We Love." The conference will be held in Charlottetown, PE, from October 15 to 17. This is our local association's annual conference and tradeshow and provides the opportunity to learn about the latest technology and developments in the water and wastewater industry within our region. The conference program contains multiple sessions related to building resiliency in our systems to help us be prepared for the next event or challenge that we may face as operators of water and sewer systems. The in-person format of the conference will also provide the opportunity to interact with friends and colleagues and to listen and share our experiences, challenges, and successes. The conference committee, led by Richard MacEwen, has assembled a great event and it is still not too late to register; more information can be found at www.acwwa.ca.

I would like to congratulate the City of Miramichi, NB, for winning the 2023 Best of the Best water taste test at the AWWA Annual Conference and Exposition (ACE) in Toronto. The water taste test will be held again at the ACWWA conference in PEI and I encourage any interested municipalities to register for this event. The winning water sample will represent the ACWWA at the next AWWA ACE, to be held in Anaheim, CA, from June 10 to 13, 2024.

I hope to see everyone in Charlottetown in October.



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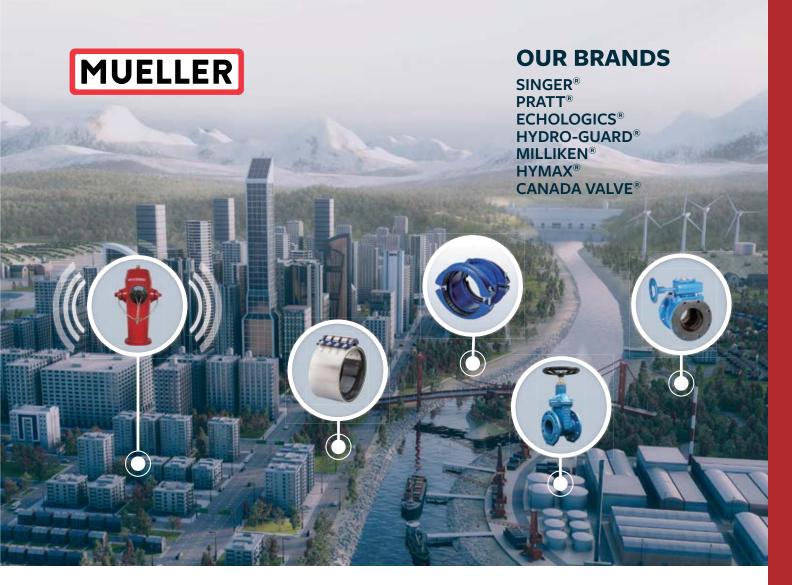
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Opportunities to connect

am sitting here enjoying our beautiful sunny weather in the first part of August as I watch the "in charge" bullfrog keeping a careful eye on the pond in my front yard. But I cannot stop thinking about the once in a 1,000-year rain event from a couple weeks



ago. I am reminded how important our infrastructure is... water and wastewater systems especially. So many lift stations, pumping stations, and buildings were literally under many feet of water. Power was interrupted. So many people were affected by the never-seen-before water levels flooding streets, fields, parking lots, roads, cars and so on. Highways, bridges, and even train tracks were washed out. Many business owners in low areas have lost



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2353 Bowman Street, Inniadil, ON L9S 3V6 Tel: 877-436-3800 • Fax: 888-745-6666 their entire livelihoods, not having insurance for overland surface water, and many people have lost their vehicles or belongings in their homes. It was so sad to learn about several people washed away in the flash floods and not being able to be saved. Most of us know someone that was affected by these floods. My heart goes out to all those who have experienced losses and especially those who have lost loved ones.

As I turn the page, I am thinking about the upcoming WEFTEC – 96th Annual Technical Exhibition & Conference September 30 – October 4, 2023, at McCormick Place, Chicago.

At this link, https://youtu.be/iLycoQnxN-U, you will find a teaser for WEFTEC. See the schedule at www.weftec.org/ attend/weftec-at-a-glance/#sat-sun.

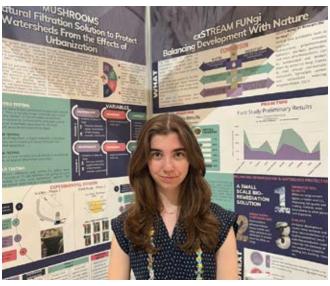
As your WEF Delegate from Atlantic Canada, I will be very busy as usual attending meetings beginning Saturday morning. I will gather as much information as possible and share this with you in upcoming issues of Go With the Flow. I hope to see some familiar faces there from the ACWWA. I'm sure you will thoroughly enjoy the educational training aspects, and technical sessions as well as the Exhibition Hall with all the vendors displaying their newest and greatest products and services. Don't forget to check out the WEF Bookstore for lots of technical resources and manuals that will help you with your career. I have heard the restaurants and watering holes are pretty good there, too. If you read this before getting there, please reach out and we can connect in Chicago.

Download the WEFTEC 2023 app on your smartphone from Google Play or the App Store to get the list of all the education and events, speakers, show planner, exhibitors, and show information. Sign up for the WEFTEC Wellness Challenge and see if you can log more steps than me at the conference. Another very worthwhile event is www.jammin4water.org. Grab your tickets and support a great cause.



2023 Canadian Stockholm Junior Water Prize Winner (data provided by WEF)

Congratulations to Ava Fischer from Pretty River Academy in Collingwood, Ontario, for winning the 2023 Canadian Stockholm Junior Water Prize with her paper on "exSTREAM FUNgi: A National Solution to Protect Watersheds from the Effects of Urbanization." Her project balances environmental protection efforts with sustainable development. Ava will compete with over 30 other countries alongside the USA representative Naomi Park, from Connecticut, at World Water Week in Stockholm, August 2023.



Ava Fischer, "exSTREAM FUNgi: A Natural Solution to Protect Watersheds from the Effects of Urbanization," from Pretty River Academy in Collingwood, Ontario

Rapidly growing populations put pressure on ecosystems and negatively affect water quality. An increase in impervious surfaces, such as parking lots and roads, provides a superhighway for pollutants to enter water systems and destabilize ecosystems. This study focused on the utilization of fungi native to North America that release enzymes to decompose pesticides, hydrocarbons, and harmful waste by preventing contamination from entering a watershed system at its origin. Two primary components of this experiment tested the filtration properties of Pleutorous ostreatus and Grifola frondosa in vitro and in a real-life scenario at a golf course. Both species reduced soil contaminants, notably nitrates, nitrites, sulfates, and lead, in lab and field studies. This solution balances environmental protection efforts with sustainable development.

Toteching Resilience Policy of The Communities of a commu And Finally, the ACWWA AGM, Conference, and Trade Show will be held the week of October 15, 2023. in beautiful Charlottetown, PEI. I am looking forward to seeing you all face to face once again. The Conference Committee, led by Richard MacEwan, P.Eng., have put together a

great program and schedule. There

When you register for the conference, please sign up for the Water For People Fun Run/Walk and pick your T-shirt size. Come out to support our Young Professionals and Emerging Leaders at their Meet & Greet Event. Don't forget to bid on the Silent Auction items and get your 50/50 tickets while at the conference. These are some of the faces of our future. Say hello and get to know them!





Photo credit: Lindsay Anderson

"These are some of the faces of our future. Say hello and get to know them!"

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Representing ACWWA on the AWWA Board

elcome to the Fall 2023 issue of ACWWA's

Go With the Flow magazine. This is my first
report as AWWA Director. I am excited to
be starting my term and I look forward to
representing ACWWA on the AWWA Board. I will use this
article to keep our members up to date on the work that
AWWA is doing.

I would like to take a moment to acknowledge the work of my predecessor Scott Grasman, who had the unenviable task of serving as AWWA Director during a global pandemic and carried out much of his work virtually and still managed to do a great job representing ACWWA.

It was great to have ACE 2023 back in Canada again after 16 years. The total registration for Toronto was 9,800 and it was wonderful to see so many Canadians in attendance. ACE will be back in Toronto again in 2029. During this year's ACE, Patrick Kerr from the Southwest Section started his term as AWWA President. Pat is the CEO of the Baton Rouge Water Works Company.

During the AWWA Board meeting in June, the Board voted to end AWWA's affiliation agreement with the New England Water Works Association. This difficult decision came after a lengthy period of negotiations between the two parties could not come to a resolution. A new New England Section of AWWA will be created to ensure that AWWA members in New England still have a section to call home.

AWWA continues to work on its Water 2050 initiative that seeks to establish a long-term vision of the future of water. This collaborative exploration will chart a course for a successful and sustainable water sector.

"AWWA continues to work on its Water 2050 initiative that seeks to establish a long-term vision of the future of water."

The process will engage in a thoughtful, intentional and inclusive discourse that results in bold, achievable goals. Ultimately, Water 2050's influence will extend beyond the water community, fostering partnerships and cross-sector collaboration for mutual and global benefit. Over the past year, five think tanks were held on the five critical drivers to the future of water: sustainability, technology, economics, governance, and social/demographics. The outcome of the think tanks are a series of reports with recommendations that will help guide the next step of formulating a long term plan and road map to 2050. I encourage everyone to visit www.awwa.org/Resources-Tools/Water-2050 to learn more.

As you are reading this, our annual conference in Charlottetown is right around the corner. This year we will be hosting AWWA Past President Joe Jacangelo as the visiting dignitary from AWWA. I look forward to seeing and meeting many of you in PEI.

Looking ahead to 2024, the AWWA Winter Board Meeting will be held in Sedona, Arizona in January, at which time a new AWWA President Elect will be selected.

If anyone has questions about AWWA feel free to reach out (johne@halifaxwater.ca).



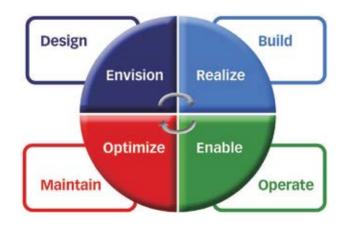












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Government Affairs Committee cabinet shuffle

he purpose of the ACWWA Government Affairs Committee (GAC) is to act as a liaison between the provincial and municipal levels of government and the ACWWA to:

- Promote cooperation between the ACWWA and various levels of government;
- Investigate and coordinate opportunities for synergy between the ACWWA and Government; and
- Develop an awareness of government programs and ACWWA's activities

"We discussed the purpose of the Committee and the methods with which we could best service the ACWWA members "

The Committee also informs ACWWA members regarding legislative and regulatory matters, and other rules such as policies, guidelines, procedures, programs, and approvals that directly or indirectly affect the drinking water and wastewater industry in Atlantic Canada.

Consistent with what is occurring elsewhere in our industry, the GAC has had some recent turnover. At the initial meeting of our recently revamped committee, we discussed the purpose of the Committee and the methods with which we could best service the ACWWA members. Along with continuing to provide content in this publication and freshening up the webpage, helping members connect with the appropriate government representative to address their concerns was also identified. As a first step in this process, I'd like to thank the outgoing members of the committee and introduce the current members, some new and some returning, including:

- Mike Abbott -Government Affairs Director
- Mike Brophy Chair, Government Affairs Committee -NS Provincial Representative
- Sylvie Morton -NB Provincial Representative
- Chris Blanchard NL Provincial Representative
- Morley Foy -PEI Provincial Representative
- Devin McAskill (CBRM) -Utility Representative
- James Trimble (AFNWA) First Nation/Utility Representative Contact information will be posted on the ACWWA website. We hope to use the website to post current information and links relevant to ACWWA members, so give us a month or so and then check in to see how we made out 🤏





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If it doesn't say



on the outside, then it's not



on the inside.







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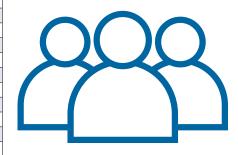
Fall membership update

Welcome to the following new members:

Name	Organization	Membership
Patrick Mahony Cooke	Progressive Marketing Consultants	AWWA
Matthew Cavanagh	Atlantic Purification Systems Ltd.	AWWA
Ian Noseworthy	City of Saint John	AWWA
David Oakley	Cape Breton University	AWWA
Adam McKnight	Government of Nova Scotia, Environment & Climate	AWWA
Michael Brophy	Government of Nova Scotia	AWWA
Tyson Joyce	Town of Lunenburg	AWWA
Mohammad Rajabi	Memorial University	AWWA
David Boudreau	Pomerleau Inc.	AWWA
Aswin Rajendran	Pomerleau Inc.	AWWA
Larry Hood	Municipality of the District of Chester	WEF
Mike Strileski	Niagara Region	WEF
Pranav Mahajan	Saint Mary's University	WEF
Gaurav Bhatia	Saint Mary's University	WEF
Ethan Kelly	University of Prince Edward Island	WEF
Ahmed Mohamed	Memorial University	WEF
Jordan Houlihan		WEF
Naomi Lewis	Dalhousie University	WEF
Noah Oyelade		WEF
Tom Gorman	Halifax Water	WEF
Louis de Montbrun	Halifax Water	WEF

As of July 20, 2023

Total AWWA active members: 407 Total AWWA late members: 42 Total active WEF members: 119 Total WEF late members: 2



Don't forget to refer a member, for a chance to win a \$50 gift card of your choice.



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Here to assist

he ACWWA Annual Conference is just around the corner and the ABEA is working hard behind the scenes to bring stellar events and opportunities to the delegates and fellow members.

For the golfers amongst us: on Sunday we will gather at Fox Meadow Golf Course. Start time is 10:00 am – make sure to check the box on your registration form.

Monday evening's hospitality venue will be the Old Triangle, featuring music, dancing, and plenty of conversation – maybe even some nibblies as the night goes on. It's an opportunity to chat with old friends and make a few new ones.

Tuesday we will present the Trade Show from 10:00 am -2:00 pm. There will be 85 booths full of the latest technology and the specialists on hand to explain what they have to offer to solve your problems or assist in preparing you for the future. Lunch will be served within the venue.

We are the proud sponsors of the Tuesday evening entertainment – come and see what is in store and if you play your cards right you might have some fun!

The ABEA continues to listen to the needs of our customers and assist in problem solving. We are a caring team made up of 59+ unique members and are here to assist in any way possible.

There is an ongoing opportunity to apply for one of the four x \$1,000 academic scholarships annually awarded to deserving individuals who meet the application criteria (visit www.abea.biz). It is never to early to start preparing.

We are proud to announce this year's scholarship recipient: Serena Phillips.

ABEA is now on LinkedIn – drop by and connect with fellow members.



Serena Phillips

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Director-at-large - Catherine Cameron - Scotia Tech/Aqua Data

Contact information for our members, and applications for our Scholarship and Grant Program can be found at

www.abea.biz









2023 ACWWA ANNUAL CONFERENCE

CHARLOTTETOWN, PEI OCTOBER 15 – 17

PRINCE EDWARD ISLAND CONVENTION CENTRE



Conference Highlights

It's not too late to register and join us in Charlottetown! Visit www.acwwa.ca/reg.

Sunday, October 15, 2023

10:00 - 15:30	Golf Tournament — Fox Meadow Golf Course
12:45 – 15:00	> Stratford/Charlottetown Wastewater Management Tech Tour
17:00 – 19:00	> Emerging Leaders Social
19:30 - 22:30	> Meet & Greet Reception
20:30 - 21:30	> Water Tower Competition

Monday, October 16, 2023

07:30 - 08:30	> Continental Breakfast	
08:30 - 10:00	> Opening Session & Welcome	
10:30 - 12:00	> Technical Sessions	
12:00 - 13:30	> ACWWA AGM & Awards Luncheon	
13:30 - 16:45	> Technical Sessions	
17:00 - 18:00	> Water for People Fun Run	
18:00 - 20:00	> Dine on your Own (Downtown Charlottetown)	
20:00 - 1:00	ABEA Reception (Old Triangle Irish Alehouse)	

Tuesday, October 17, 2023

07:30 - 08:00	> Continental Breakfast
08:00 - 09:30	> Technical Sessions
09:30 - 10:30	> Best of the Best Water Taste Test
10:00 - 14:00	> Tradeshow
14:00 – 14:30	> Hydrant Hysteria Demo
14:30 - 16:00	> Technical Sessions
18:00 - 22:00	> ABEA Casino Night

Best tasting water in North America! How did that happen?

By Darren Row, P. Eng., Director of Engineering, City of Miramichi

In 2015, I became Director of Engineering for the City of Miramichi and I was searching for conferences to attend as part of my professional development. I had attended the ACWWA Conference in 2006 and really enjoyed it so I made a point to ensure I attended every year. When I viewed the program for the conference in 2016, I noticed a "Best of the best tap water taste test" contest and it sure got my attention. Is our water good enough to enter? We had a discussion internally and thought, why not, what's there to lose?

I gathered the water treatment plant operators and some supervisors to come up with a plan. After all, Miramichi has three different water systems, with 19 active wells feeding them. Newcastle system has six wells with four of them supplying our water treatment plant, the Douglastown system having four wells, and the Chatham system having nine wells. We sampled from various parts of the city and had an informal



taste test ourselves, with one location a clear winner. Exact location? Not to be revealed, as there is still some

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animosity between the old Towns of Chatham/Newcastle so we will leave it as Miramichi's water. Only a few people are lucky enough to know the area of the city with the best tasting water! Fast forward a few months later. I was in Moncton at the ACWWA Annual Conference and one morning I was meeting with some suppliers to review some new products and got a phone call: "They are looking for you you won!" "Won what?" I asked, as I thought maybe I won a door prize or the 50/50 from the previous night's ABEA pub night.

"Just come down and find out," said whoever it was on the phone. I found Julie Stokes from the City of Moncton, and she told me we had won the best tasting water contest. I was really shocked, and didn't know if that was a big deal or little deal... I had no clue at the time. Jay Shanahan, Director of Public Works in Miramichi, and I got some pictures and the trophy is still on display in our office.



As we meandered through the conference, we got a lot of congratulations, and started having more and more discussions with people about the win. So we left the conference pretty proud of the award, and have entered every year since. A second win in 2017 and another win in 2018 in Cape Breton cemented the fact that, indeed, our water was pretty damn fine. Not sure what happened in 2019 in Halifax – RIGGED! – though I have no proof of that, but sometimes you have to add some dramatic effect to help the story.

After a few years' hiatus, we were back at the conference in Saint John in 2022 and once again we came out on top. Now I really got the sense that some others were getting annoyed with all our wins. I do tend to promote the win, as anyone who knows me knows, so that probably doesn't help.

ACE in Toronto in 2023: for sure Jay and I were going, and being the Section winner, the liquid gold was coming with us as well. We were up against 31 other sections, and to be honest, I had no idea how we would do. As we stood in the crowd watching the event, they announced that we cracked the top 10 for the finals, and I was hoping for a podium for sure

Winner - MIR-A-MATCH-CHI! After I corrected the folks from Denver on our name, it was picture time again. The Stanley Cup of Water; but the trophy was broken, and they wouldn't let us bring it home. I was all set to parade it around that night at some sponsor events; probably a good thing they didn't let us take it – I do tend to love celebrating winning anything.

Rocky Mountain spring water? No, the gold standard is an 18,500 community in northeast New Brunswick. The irony of all of this? In 1980, Newcastle's water supply was deemed to be contaminated and had a do not consume order issued. New wells were drilled and it led to the construction of a new testing lab in Fredericton as well as a new water treatment plant in Newcastle. The two wells that were deemed contaminated? Still in use. There was never an issue with the water. The issue was testing accuracy and the sampler's cross contamination from smoking, as we only recently heard. So, to come full circle and be the Best Tasting Water in North America? A really huge honour, and whoever wins should celebrate and be very proud it. Stanley Cup of Water – we will enjoy the victory until ACE 2024.





Fresh Ideas competition at ACE23 in Toronto



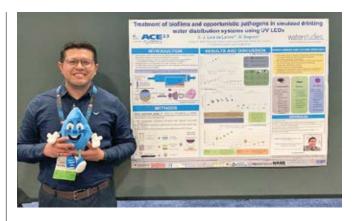
By Jaser Lara de Larrea

ttending ACE 2023 was very important for me, as I knew I was representing the Atlantic Canada Sector (ACWWA) of the American Water Works Association. Being the winner of the Fresh Ideas competition the previous year was an honour, so I was also nervous but excited as this was the first international conference I had attended. For this conference, I participated in a poster competition of the work I had been doing for my thesis research project, so there was a lot of work behind it.

I was thrilled I had the opportunity to meet other people that were also competing and learn more about their work. The conference's most exciting part was networking with people from the industry and other researchers.

I also attended various technical sessions. Most focused on monitoring opportunistic pathogens in drinking water distribution systems, especially Legionella, which was a central part of my research project. I was interested in learning about other projects on the same topic and hearing about new methods and technologies for water treatment.

One of the best moments for me was to meet Dr. Mark LeChevalier, who is an expert in Legionella; for my project's literature review I had to read many papers on the subject,



and most of the ones I read were from Dr. LeChevalier, so when I saw him giving his presentation at the conference, I immediately recognize the name. He also came to the poster session, and he was interested in my project and made some comments about it, which I appreciated.

I want to thank ACWWA for the funding provided, AWWA for all the accommodation, and my supervisor, Dr. Graham Gagnon, director of the Centre for Water Resources Studies (CWRS), for all the support throughout this trip. 🥌





he annual conference is upon us, and we are excited to be back with everyone in the beautiful Charlottetown. We hope that you will join us during our Sunday night mixer at Brick House to kick off the conference, lace up your running shoes for the Water For People fun run/walk on Monday at 5:00 pm, and take part in our conference-long silent auction and 50/50 raffle.

The committee started organizing technical and non-technical lunch and learns last fall to explore different topics around water science and career development. These events were well received, and we are planning to host two more in the coming months. Our first event will be hosted in the fall and the other in the winter. We will keep everyone posted about the details of the events through the ACWWA Twitter and LinkedIn pages.

The ACWWA-WFP committee wishes to congratulate the City of Moncton's Water and Wastewater staff as the 2023 recipient of the Water For People's Kenneth J. Miller Founders' Award. Julie Stokes accepted this award on behalf of all City of Moncton Water and Wastewater employees for their continued commitment and passion towards the goals and work of WFP. The City of Moncton has had a long-standing affiliation with Water For People, sponsoring their first WFP

project in 1997 and inaugurating a WFP donation program. Since that time, the City of Moncton has consistently donated up to \$10,000 every year to WFP, announced at the annual ACWWA conference. Originally initiated by Mike Richard, Julie Stokes, Utilities Supervisor for the City of Moncton, along with staff continue to support and strengthen this program since joining the municipality in 2004. Thank you Julie and her colleagues at the City of Moncton for all your support!

We are also interested in hearing from our members! We have put together a brief survey via Survey Monkey to see where our members are from and what you would like to see the Emerging Leaders (EL) Committee focus on in the upcoming year. Please follow the QR code to

link to our survey. In addition, if you would like to be considered by the EL Committee for future member spotlights or are interested in joining the committee, please send an email to acwwa.els@gmail.com.



ACWWA Emerging Leaders Members Survey



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AWWA scholarship winners

The AWWA Scholarship Program was pleased to award four students attending universities in Canada scholarships totaling \$32,000 USD.

Jacob Steele, Dalhousie University Mennatallah Alnahas, University of Toronto Karl Zimmerman, University of British Columbia Noor Tamim, Western University



Pursing a Master of Applied Science in Civil Engineering at Dalhousie University in Halifax, Nova Scotia, Jacob Steele has been awarded the Larson Aquatic Research Scholarship (LARS) from AWWA's Water Equation. Jacob works as a part-time research analyst to support himself while in school and says that the

scholarship will allow him to spend more time studying and less time working.

"Outside of school, I am also a national-level sprint flatwater kayaker training for the opportunity to represent Canada at the 2024 Olympics. I've previously raced at the World University Championships and the Pan American Games and narrowly missed out on qualifying for the Tokyo Olympics. This involves training 20+ hours per week on top of my school and work, so any less time I need to spend working part-time during my degree will be put to good use."



Karl Zimmerman is the 2023 recipient of the Stantec Scholarship and a candidate for PhD in Chemical and Biological Engineering at the University of British Columbia, Karl attended ACE23 and shared his experiences with Canada's First Nations communities and his involvement with water researchers in

southern Madagascar with the sponsors and scholarship recipients at the annual scholarship breakfast. Karl says, "In the final year of my PhD, I am visiting NGOs around the world to gain diverse perspectives on the social/ community participation of sustainable water solutions. Following my graduation (**this is the five-year career horizon), I hope to join consulting engineering towards building resilient water infrastructure, but also to understand how the water sector is addressing issues like aging water infrastructure and approaching to the next paradigm of semi-/decentralized water systems."



A third-year PhD candidate at University of Toronto, Mennatallah Alnahas is the recipient of the 2023 Thomas R. Camp Scholarship awarded by CDM Smith. Menna serves as the President of the student chapter for the Ontario Water Works Association (AWWA Section) and is a Graduate Research

Assistant in the Drinking Water Research Group at the University of Toronto. She specializes in environmental engineering and her research focuses on developing risk assessment frameworks, monitoring tools, and treatment technologies for cyanobacteria and cyanotoxins in the context of drinking water. After graduation she hopes to join a consulting firm to contribute to the water community.



The 2023 American Water Scholarship has been awarded to Noor Tamim, an Engineer in Training attending Western University in London, Ontario. He is working to obtain his Master of Engineering Science in Environmental Engineering and is also Vice-President of the AWWA/WEF student chapter at

Western University, and a research assistant collecting field and lab data and performed statistical and quantitative analysis to interpret data and optimize experiments. Noor likes the idea of working for a small engineering firm where he can continue to learn new skills and have an opportunity for growth.

Congratulations!

OUR CONCERN FOR THE ENVIRONMENT IS MORE THAN JUST TALK

As we continue to deliver valuable information through the pages of this magazine, in a printed format that is appealing, reader-friendly and not lost in the proliferation of electronic messages that are bombarding our senses, we are also well aware of the need to be respectful of our environment. That is why we are committed to publishing the magazine in the most environmentally-friendly process possible. Here is what we mean:

- We use lighter publication stock that consists of recycled paper. This paper has been certified to meet the environmental and social standards of the Forest Stewardship Council® (FSC®) and comes from responsibly managed forests, and verified recycled sources making this a RENEWABLE and SUSTAINABLE resource.
- Our computer-to-plate technology reduces the amount of chemistry required to create plates for the printing process. The resulting chemistry is neutralized to the extent that it can be safely discharged to the drain.
- We use vegetable oil-based inks to print the magazine. This means that we are not using resource-depleting petroleum-based ink products and that the subsequent recycling of the paper in this magazine is much more environment friendly.

- During the printing process, we use a solvent recycling system that separates the water from the recovered solvents and leaves only about 5% residue. This results in reduced solvent usage, handling and hazardous hauling.
- We ensure that an efficient recycling program is used for all printing plates and all waste paper.
- Within the pages of each issue, we actively encourage our readers to REUSE and RECYCLE.
- In order to reduce our carbon footprint on the planet, we utilize a carbon offset program in conjunction with any air travel we undertake related to our publishing responsibilities for the magazine.



So enjoy this magazine...and KEEP THINKING GREEN.

Please see below for announcements, upcoming deadlines, and volunteer opportunities. If you have any items you would like to add to the announcement board please contact ACWWA at contact@acwwa.ca.

Volunteer positions!

ACWWA is looking for individuals who are interested in becoming more involved on tasks within the organization. Current positions available included:

- Project Highlights Coordinator: Responsible for finding interesting projects and working with project teams to develop the story's to include in Go With the Flow magazine and the ACWWA website. This individual would work the Communications Committee to develop and publish the Project Highlights.
- Interviews Coordinator: Responsible for finding and working with individuals in the water and wastewater industry to highlight in Go With the Flow magazine and the ACWWA website. This individual would work the Communications Committee to develop and publish the interviews.

If you are interested in these positions, please provide a maximum 200-word submission expressing your interest and explain what you would like to do in the role. This can be sent to *kmaccaull@dillon.ca*.

ACWWA courses

ACWWA provides technical training and education courses including:

- Small System seminars
- Management courses
- Education courses:
 - Water Distribution
 - Water Treatment
 - Wastewater Collection
 - Wastewater Treatment

Check out the website for self-paced courses: www.acwwa.ca/education/acwwa-courses.html#schedule.

Upcoming in-person course

Wastewater Treatment Level I & II – Dieppe, NB 2023/10/31 – 2023/11/03

Water Treatment Level I & II – Dieppe, NB



2023 ACWWA Annual Conference

Please join us in Charlottetown October 15–17, 2023 for the 2023 ACWWA Annual Conference.

A conference you want to attend. The conference organizing committee has been working hard at making this a memorable event as PEI celebrates its 150th anniversary of joining Canada.

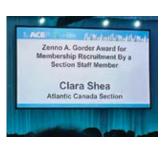


As always, the conference committee has organized a high-quality technical program. The technical sessions will focus on Building Resiliency in our industry. Charlottetown was witness to the importance of resiliency planning during and after Hurricane Fiona. Come and share your experience related to improving resiliency in our industry. The conference program will be filled with all kinds of favourites like golf (Fox Meadow Golf Club), Technical tours, ABEA tradeshow, ABEA Hospitality night (Old Triangle), Emerging Leaders Mixer, Water Taste Test and Water Tower Competition, hands-on technical demonstrations, and our wrap-up event.

Online registration is available until midnight Friday, October 13, 2023.

Clara Shea accepts award at ACE23

Congratulations to ACWWA Executive Director Clara Shea on winning the Zenno A. Gorder Award! Clara was recognized at ACE23 in Toronto in June.





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Managing extreme rainfall events

By Adam Sketchley, P.Eng., M.A.Sc. – DesignPoint Engineering & Surveying Ltd.

n July 2023, a large rainfall event occurred across Nova Scotia. with widespread flooding and infrastructure damage. Rainfall on July 21–22, 2023 exceeded the one in 100-year event in several locations. More than 300 mm of rain is estimated to have fallen in some locations, with much of the rainfall coming over a six-hour period. When preliminary data was compared to data provided by Environment and Climate Change Canada for Halifax, the depth of rainfall over a six-hour period exceeded the one in 1,000-year return period.

Stormwater infrastructure such as storm sewers and culverts are typically designed using a one in 5-year to a one in 100-year rainfall event. Critical infrastructure such as bridges or dams at times use even larger events. The rain event which occurred in July serves as a reminder that although our built environment is designed to withstand industry

standard design conditions, more extreme rainfall amounts are always possible. This is especially true when discussing natural phenomena such as rainfall. A one in 1,000-year event has a 0.1% probability of occurrence at a given location each year, and even less frequent events can and do occur.

Statistical analyses can be completed on historical data to determine the maximum probable rainfall which can occur at a given location. Based on the approximations presented in the Rainfall Frequency Atlas of Canada (Hogg and Carr, 1985), the maximum probable rainfall for Halifax is 288 mm over six hours and 525 mm over 24 hours.

It is not practical to build all infrastructure to meet the worst possible conditions; however, it is important to understand that these conditions can occur. Understanding what happens when design criteria are exceeded can be critical for municipal infrastructure when

rare events take place. For instance, identifying major drainage routes and understanding that stormwater infrastructure could be overloaded can help with emergency planning and identifying where maintenance should be focused. Clearing systems ahead of large rain events can limit damage to a system. Preparing emergency plans for flood-susceptible areas improves response time.

The flooding and damage which resulted from the July 2023 storm was devastating in the hardest-hit areas. Enormous losses occurred, the value of which will not be known for some time. It is important to remember, however, that a much of the stormwater infrastructure in the affected area withstood this extreme rainfall event.

Do you have a topic for a future Back to Fundamentals article? Email adam.sketchley@designpoint.ca or contact@acwwa.ca and we will do our best to cover it!



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