

# GO with THE FLOW

THE OFFICIAL PUBLICATION OF THE ATLANTIC CANADA WATER AND WASTEWATER ASSOCIATION

## 75<sup>TH</sup> ANNUAL CONFERENCE *Highlights*

October 2-4, 2022 | Saint John, NB



### INSIDE:

- ACWWA's IDE Committee
- Team ACWWA Blood Drive
- Addressing Wastewater Overflows



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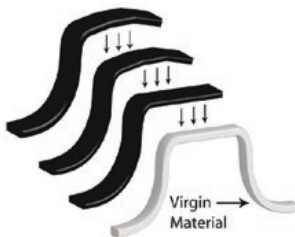
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On the cover: Winter evening in Durrell Harbour neighbourhood of Twillingate, Newfoundland. | Dreamstime.com





## Looking forward to the upcoming year

I would like to start off by saying thank you to the ACWWA Board for nominating me to be the ACWWA Chair for 2022–23. I have been a member of the association for over 15 years and am honoured to be recognized for my contributions to the industry particularly within my home province of Newfoundland and Labrador. For those who do not know me, I am the manager of Water and Wastewater Systems for the City of St. John's and am a Level 4 Water Distribution System Operator and a Level 4 Wastewater System Operator. My interest is improving the operation and maintenance of water and sewer systems and sharing that knowledge with other operators.


The ACWWA Annual Conference is the premier event for our organization for sharing of knowledge and networking with other operators. I would like to congratulate Barb Crawford and Michael Baker and their committee for hosting this year's conference and making it a great success. I think everyone enjoyed being back in person again and reuniting with old colleagues while making new ones; this was evident by the great turnout for the ABEA social night at the Saint John Ale House. However, it just wasn't the social events; all events were well attended, and this year's conference had, not one, but three technical tours. The tours included the Loch Lomond Water Treatment Facility, Moosehead Breweries (Brewery Water Treatment), and the Clow Canada fabrication facility. These tours offered something for everyone, and additional tours highlighted some of the other components of the water and sewer industries.

"I want to highlight the opportunities that exist within our organization to our members and non-members with the hope that we can expand our membership."

There were several changes made at the conference, the most notable being the change of the name of the Young Professionals section to the Emerging Leaders section which accurately reflects the composition of this group, as they are the future of our industry. Seven of these members actively participated in the conference by presenting their technical papers as part of the Fresh Ideas contest. I would like to congratulate the winner of this contest, Carlos Jaser Lara de Larrea, for his presentation entitled Treatment of Biofilms and Opportunistic Pathogens in Simulated Drinking Water Distribution Systems Using UV LED. Carlos will represent our organization at the 2023 AWWA ACE conference in Toronto – we wish him the best!

The theme of this year's conference was Uncertainty to Opportunity, which ties into one of my goals as ACWWA Chair. I want to highlight the opportunities that exist within our organization to our members and non-members with the hope that we can expand our membership. Fortunately, there was a positive benefit from the COVID pandemic, as it improved remote learning opportunities – which is important for smaller communities located throughout the Atlantic provinces. The Association has partnered with BCWWA and WWOTC to offer online courses that are both self-paced and instructor led. This has been a great addition to our course offerings, allowing for more variety and improving access to learning opportunities for those who are unable to travel to in-person events.

I also want to highlight one of the unique programs that our association offers to its members: we have a library of books, manuals, study guides, and videos that are available to be borrowed. Not all associations have a section library and I encourage everyone to review the contents of the library on our website, [www.acwwa.ca](http://www.acwwa.ca).

I look forward to working with the Board, committees, and all members over the next year to continue to build upon the success of our organization. 



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## Familiar faces again

I am getting ready for that time of year again... winter. It has been a great summer and fall with things mostly returning to normal – minus Fiona's unwelcomed visit in September. Many of us were affected in diverse ways, some not as fortunate as others. I'm trusting you and your families all are getting things back in order. A constant reminder that climate change is here to stay, and as Frankie says: "Be Prepared."

This year we finally had an in-person ACWWA Conference and AGM. It was so great to see familiar faces as well as meeting fresh faces in Saint John, NB. On that Sunday morning, we had our first in-person board meeting in an exceptionally long time. It felt better than playing Hollywood Squares and someone saying "...you are on mute..." A lot of work goes on behind the scenes to prepare for this conference, and I want to commend everyone for their role that made this a success. I believe it was a good experience for all who attended. A big recognition goes out to Cathy Cameron who was our Chair for two consecutive years during a pandemic. This was the first time in ACWWA history that a Chair served two consecutive years! Cathy's leadership kept us on task. Also, congratulations to all the award recipients. I am humbled to even be nominated for an award, then lucky enough to be presented with the Bedell Award by Janet Hurley Cann, WEF Trustee and Liaison to the WEF CAC (Canadian Affairs Council).

Thankfully, we were all presented with the new WEF Strategic Plan at WEFTEC, so Janet does not have to shoot me now for



talking about it before the big reveal. I have included the new one pager WEF Strategic Plan (see page 11).

WEFTEC 2022 was held in New Orleans a few days after the ACWWA Conference. It was a whirlwind of travel over a couple weeks. My WEF House of Delegates meetings started at 8:00 am on Saturday and the next several days were booked solid with other WEF meetings. Saturday afternoon we were off to visit the Annual WEFTEC Community Service Project at a local high school. They diverted thousands of litres

of water from the roof drain run-off that caused flooding in the streets into a new garden area with trees and plants that contains the water underground and nourishes the plants and trees.

Pictured above is the 2021–22 WEF President Jamie Eichenberger, accompanied by the Mayor of New Orleans plus other Dignitaries and Volunteers for the Ribbon Cutting Ceremony.



I attended the MA Leadership Meeting with Clara, where I formally invited the Speaker of the House of Delegates, Donnell Duncan, to attend our WEFMAX meeting in Charlottetown, PEI in May 2023. I also presented an emotional and extremely



proud Dianne Crilley, WEF Staff, with the coveted ACWWA 5S Lobster Shovel for her decades of work supporting the ACWWA.





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WEF has some exciting projects they have been working on such as the DE&I (Diversity Equity & Inclusion) Tool Kit. This is now available from [www.wef.org](http://www.wef.org) to every Member Association to use to help encourage more DE&I. I am also involved with the House of Delegates of the Future Working Group; I am the Vice Chair of the WEFMAX Committee and have been personally asked by the new WEF President Ifetayo Venner to sit on the WEF Strategic Advisory Committee.

During one of our H.O.D. meetings, Santos Saenz and Gustavo Gallo-Villanueva, WEF Delegates from Mexico were asking the room how they could connect with other MAs (Member Associations) other than just once per year at WEFTEC. I spoke up and said the Canadians have a CAC that includes all the MAs across Canada. I met with them both after the H.O.D. meeting and invited them to our CAC Meeting to see if we could help them organize a Council for Spanish-speaking MAs. I explained briefly how the CAC works and asked them if that was something they would like to try. They were very interested, and what do you know? They said they would attend our CAC Meeting to get more information. I emailed them our WEF CAC MOU as a sample document to get started; I also spoke with several WEF Past Presidents,



various Board of Trustees Members, and WEF staff about this idea over the next day.

We held our Annual CAC (Canadian Affairs Council) WEFTEC Meeting on Monday afternoon where I get to “pass the gavel” to the incoming Chairperson, and we discussed some of our goals and action items for the upcoming year. After my second turn as the CAC Chair, I am pleased to introduce the new Chair for 2022–23, Erin Longworth, WEAO (Water Environment Association of Ontario).

Our new Mexican Delegate friends also showed up at our CAC meeting along with Jackie Jarrell, a (Spanish-speaking) WEF Past President and they said they are going to try make the Spanish-speaking Council idea work. They were excited that their “Big Brother” from Canada approached them to invite them to the CAC Meeting and was going to help them



WEF President's Reception for Ifetayo Venner



Robert Haller, CWWA; Joan Hawley, WEF Fellow; Janet Hurley Cann, WEF Trustee; Jenny Hartfelder, Past President; Jackie Jarrell, Past President; and Dave Galbraith. Everyone pictured are ACWWA 5S Lobster Shovel Recipients.

put together a WEF Spanish-speaking Council. One problem... I do not speak Spanish, so as luck would have it, we appointed a Spanish-speaking member of the WEF CAC from Ontario to help them get started. Stay tuned.

Clara and I had a busy schedule with various meetings and events. We were fortunate to be able to congratulate the new incoming 2022-23 WEF President, Ifetayo Venner, in person as well as attend her President's Reception held in the building where they store the Mardi Gras floats. It was fun.

It was great to be able to attend WEFTEC in person after missing the past two years. The ACWWA is well known by WEF, and our voices are being heard at the top. I look forward to my next year of service to the ACWWA and I appreciate the opportunity to be your ACWWA WEF Delegate. Please reach out if you ever have any questions about WEF and their programs. If I don't know the answer, I will find it for you. 🌊





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Top row, L to R: Jamie Eichenberger, Corey Williams, Shellie Chard, Keith L. Hobson, Gustavo R. Gallo-Chacon, and Diego Rosso.

Bottom row, L to R: Walt Marlowe, Janet Hurley Cann, Aimeé R. Killeen, Ifetayo Venner, Howard Carter, and Stephen Sanders.



# Life Free of Water Challenges

## WEF Strategic Plan

### Our Mission

Inspiring the water community in pursuit of human and environmental well-being

### Our Vision

Life free of water challenges

### Our Three-Year Outcome Statement

Amplify the stories of water to grow, strengthen, and diversify the water community



### Our Strategic Goals

#### Goal 1

Attract and develop a diverse and passionate water workforce

##### Goal 1 Strategies

1. Raise public awareness about the importance of water and the water workforce
2. Reduce barriers to workforce entry and retention
3. Provide extraordinary opportunities for connection, growth, and education
4. Cultivate strategic partnerships

#### Goal 2

Cultivate a purpose-driven community to sustainably solve water challenges for all

##### Goal 2 Strategies

1. Drive connection and collaboration for the development of innovative solutions
2. Deliver best-in-class member experience
3. Creatively develop and deliver content and programming

#### Goal 3

Lead the transformation to the Circular Water Economy

##### Goal 3 Strategies

1. Convene stakeholders to craft WEF's Circular Water Economy framework and best practices
2. Proliferate WEF's Circular Water Economy framework and best practices
3. Champion adoption of Circular Water Economy
4. Eliminate barriers to Circular Water Economy adoption

### Our Core Values



Lead boldly with purpose and agility



Focus on our customers through empathy and service



Collaborate for collective impact



Integrate Diversity, Equity, and Inclusion in all we do



## A busy time of year

The winter magazine deadline typically comes up in the middle of a very active period for all those involved in the water industry. This year is no different as the ACWWA conference was recently completed in Saint John, NB and a host of other events are either recently completed or coming up in the next few weeks. The Saint John conference was a very successful event with all those in attendance ecstatic to be to be networking with colleagues in person at a live event.

A week after the ACWWA conference I was part of a three-person contingent that attended the Regional Meeting of Section Officers for Region 1 of the AWWA, which includes the Atlantic Canada, Quebec, Chesapeake, New England, New York, New Jersey, and Pennsylvania chapters. This meeting was also a return to a live format after a few years of virtual events and while many of the attendees



were new, it was clear that the returning attendees were thankful for the opportunity to meet in person.

These meetings provide an opportunity for the parent organization (AWWA) to communicate new information to multiple sections with ample opportunity for feedback and to facilitate sharing of information and ideas between the sections on other topics of common importance. The meetings were a great opportunity for me to learn about how our organization fits into the greater scheme of things and confirmed, once again, that the water professionals of Atlantic Canada are a smart, resourceful crew that are welcomed and respected by their peers throughout North America.

Next up was a meeting of the Canadian Affairs Committee (CAC) of the AWWA and the CWWA National Water and Wastewater Conference (NWWC). These occur back-to-back in early November. The NWWC conference offers a wide-ranging technical program covering almost all aspects of the municipal water sector, while offering a great networking environment for Canada's water leaders. The program focuses on water and wastewater management including:

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- Water efficiency programs, community outreach, etc.
- Biosolids management
- Utility security
- Climate change and its impacts on the water and wastewater sector
- Collaborative research between utilities and academic institutions

I'll report more on these meetings in the next issue of *Go With the Flow* magazine.



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## Update on our membership

Welcome to the following new members:

Name	Organization	Membership
Fred Whynot	Municipality of the District of Chester	WEF
Leigh Besanger	Municipality of the District of Chester	WEF
Louis Morimanno	NGT Canada Inc.	WEF
Gaurav Bains		WEF
Tanner Curtis	Circuit Rider Trainer	AWWA
Madison Gouthro	Sexton Design & Tech. Library	AWWA
Jin Li	Dalhousie University	AWWA
Mervin Smith	Town of Trenton	AWWA
Brian Laidlaw	Pinnacle Agencies Ltd.	AWWA
Brad Vincent	EMS Water Systems	AWWA
Alberto Serracin-Pitti	Emco Ltd.	AWWA
Donna Hicks		AWWA
Jenna Arsenault	Town of Richibucto	AWWA
Rene Lagace	City of Moncton	AWWA



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Total WEF late members: **2**

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# 75<sup>TH</sup> ANNUAL CONFERENCE *Highlights*

October 2-4, 2022 | Saint John, NB

The 75th Annual Conference of the Atlantic Canada Water and Wastewater Association was held October 2 to 4, 2022 at the Saint John Trade & Convention Centre. After two years without an in-person conference, this time together was a wonderful opportunity to catch up with our water and wastewater industry colleagues!

Conference Co-Chairs Michael Baker and Barb Crawford of the City of Saint John were delighted with the level of support for the event, which allowed the conference committee to provide attendees with a wide range of networking opportunities, informative and interesting technical tours, and a strong technical program. Saint John is known for its hospitality – and the City did not disappoint!

The conference theme, “Uncertainty to Opportunity” was consistent throughout the conference program. The keynote address was brought to us by Saint John Energy CEO, Ryan Mitchell. Ryan shared how Saint John Energy is learning from the past and using “lessons learned” to inform their future planning. The keynote set the conference up for thoughtful technical presentations from many of our industries best and brightest.

Major award winners were recognized at our Opening General Session and the AGM luncheon. Dr. Jennie Rand was awarded the prestigious George Warren Fuller Award. The Ira P. McNab award was presented to Amy Winchester. Dave Galbraith was awarded the Bedell Award. A full summary of all award winners and 5S Shovel recipients are included in this issue of *Go with the Flow*.



The City of Miramichi was – once again – awarded the “Best of the Best” tap water taste test’s highest honour... first place. The City of Saint John’s Loch Lomond Drinking Water Treatment Facility was awarded second place, and the City of Fredericton was awarded third place. Thank you to our judges, City of Saint John Deputy Mayor, John MacKenzie, Town of Rothesay Mayor, Dr. Nancy Grant, Town of Grand Bay-Westfield Deputy Mayor, Erin Toole and AWWA Treasurer, Jon Eaton.

The taste test ran directly into the ABEA/ACWWA Trade Show where exhibitors showcased their products across almost 100 booths. The Trade Show is a highlight of every conference, and we were so glad to expand our familiarity with new and improved products and services.

Tuesday night entertainment was reimagined with ABEA sponsoring the festivities. Delegates enjoyed a “food truck” style supper with a mashed potato bar and churro decorating station, among many other delicious bites. British comedian turned Town of Rothesay resident, James Mullinger, had us in stitches as we ended Tuesday night with a laugh.

The 2022 ACWWA Conference Committee would like to thank all those who attended or contributed to the success of our conference in any way. Thank you to our presenting sponsors, Greatario Engineered Storage Systems, CBCL Limited, and CLOW Canada. A full list of our conference sponsors is included in this issue (see page 21) – this conference would not have been possible without your generous support. We hope you enjoyed yourself and will visit us again!

See you next year on Prince Edward Island! 



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# CONFERENCE *Wrap-up*

**T**he 2022 ACWWA Annual Conference in Saint John, NB was a great success and experience for members of the Emerging Leaders and Water For People committees.

The Emerging Leaders kicked off the conference on Sunday evening with a well-attended speed networking event and mixer held at the Gahan House, sponsored by Sansom Equipment. As our first in-person conference since 2019, it was a great experience for new and familiar faces. Thank you to the established professionals who attended the event and engaged with those new to the industry, your support means a lot! Dalhousie Master's student Xuedongzi Jiang remarked: "Attending ACWWA conference was an amazing experience to me! Various events provided me many opportunities to chat with professionals. Their experience and advice gave me confidence and direction to start my career." Ph.D. student Theresa Afi also enjoyed the conference and "seeing the impact research has on industry work. I learnt the phrase 'the water community' – a phrase that gives me a sense of belonging. As a person of colour, I look forward to seeing diverse groups attend these conferences because they are very insightful!"



The Emerging Leaders were also busy volunteering, networking, and giving presentations at the conference. Ten Emerging Leaders gave oral presentations, eight of which were considered

for the Fresh Ideas competition. It is a pleasure to announce that Jaser Lara de Larrea, a Master of Applied Science Student from Dalhousie University, won the Fresh Ideas competition with his talk on "Treatment of Biofilms and Opportunistic Pathogens in Simulated Drinking Water Distribution Systems Using UV LEDs." Jaser will be representing the Emerging Leaders of ACWWA in the Fresh Ideas poster competition at the 2023 AWWA Annual Conference and Exposition in Toronto (June 11-14)!


*"I was really surprised to have won the Fresh Ideas Award. I feel so honoured as it was also my first time presenting at a conference and it's nice to know that future young professionals are getting recognized for their efforts."* –Jaser Lara de Larrea

The Water For People committee held several fundraising events at the conference to support Water For People projects. **In just three days we were able to raise an impressive \$18,235!** This is no small feat for a small AWWA section! The silent auction had several highly



contested bidding wars, most notably for the Toronto Maple Leaf tickets donated by Neptune Technology. Thanks to all those who generously donated to the auction this year, which resulted in raising \$3,085. A special thanks goes out to the City of Moncton employees who donated \$10,000 from their scrap metal recycling program. Each year we are blown away by their contribution from this program and truly appreciate it! The 50/50 draw also had an exciting conclusion with Tom Cameron having the winning ticket and immediately donating his winnings back to Water For People.

We also thank those who donated to the table auctions at the Tuesday Night Social, \$250 donated by the Jeff Jensen Photo contest, those who participated in the Fun Walk and Run, Glenn Ross for donating the T-shirts, and Sansom Equipment for supporting the Fun Run, and Greatario for their donation to Water For People from their lanyard recycling program. Overall, it was a big success, and we couldn't accomplish our fundraising goals without you! We are excited for next year's ACWWA conference in Charlottetown, PEI and hope you will join us again in our efforts to raise funds for sustainable water projects around the globe!

The Emerging Leaders and Water For People committees have some upcoming events planned for 2023. The WFP charity softball tournament is planned to return in summer 2023. Keep an eye out for details on the ACWWA social media pages and website. For anyone looking to learn more about the Emerging Leaders and Water For People committees, or to help out at events, contact the Emerging Leaders Chairs Kyle Rauch ([kyle.d.rauch@dal.ca](mailto:kyle.d.rauch@dal.ca)) and Isobel DeMont ([demont@dal.ca](mailto:demont@dal.ca)), or the Water For People Chair, Meghan Swanburg ([meghan.swanburg@acadiau.ca](mailto:meghan.swanburg@acadiau.ca)). 



# OUR 2022 Award Winners

## SILENT HERO - Corbin Stevens

Corbin is primarily responsible for the operation and maintenance of the water treatment and distributions system in Pictou Landing. He is also backup operator for the wastewater treatment and collection system. Corbin has been very active over the last year to advance his certification in water and wastewater operations. He has attained additional certification in water treatment, water distribution, wastewater treatment and wastewater collection, all while working full time with Pictou Landing First Nation. In addition to being a member of ACWWA/WEF, Corbin is a member of the board for MPWWA and has extensive service as a volunteer fire fighter.



member of ACWWA, or employed by a utility member of ACWWA. Our award recipients this year are Barb Crawford and Katherine MacCaull. Thank you for your contribution to the water and wastewater community over the years!

## EMERGING LEADER AWARD - Tiannie Paul

The Emerging Leader Award (Young Professional Award) recognizes a Young Professional within ACWWA for outstanding contribution to the water and wastewater industry and to the ACWWA Emerging Leaders Committee. Tiannie has shown much leadership and heart in everything she does and is certainly a great example and leader for future generations. We are proud to have her as this year's recipient of the Emerging Leader Award.



## CONTRIBUTION AWARD - Barb Crawford and Katherine MacCaull

The Contribution Award, formerly the Volunteer Recognition Award, is awarded by ACWWA and may be presented annually to recognize outstanding contributions by an individual or a group of individual volunteers to ACWWA programs and/or the water industry throughout Atlantic Canada. The nominee must be a



## FRESH IDEAS - Jaser Lara de Larrea

The ACWWA holds a presentation competition each year. All topics must be related to the water and wastewater profession. Presentations must be 20 minutes in length with time for questions.

The Fresh Ideas program has been developed through AWWA's Manufacturers/Associates Council and the YP Committee. The top presentation selected is given the opportunity to compete in the Fresh Ideas poster



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competition at the AWWA Annual Conference and Exposition. This year's winner is Jaser Lara de Larrea.

**5S SOCIETY**

The Select Society of Sanitary Sludge Shovelers was originated to encourage members to "get involved." You cannot join the Society – you must be "selected." The 5S Society is a WEF-member specific award to honour those who have made a particular contribution to the water and wastewater industry in their MA. This year, the ACWWA is proud to present the award to:

- Janey Hurley Cann**
- Jon Eaton**
- Cody Finan**
- Richard McEwen**
- Julie Stokes**
- Brent McGovern**
- Cathy Cameron**
- Jason Phillips**



**FULLER AWARD – Dr. Jennie Rand, P.Eng.**

Dr. Jennie Rand is the A. D. Foulis Chair in Engineering and Associate Professor at Acadia University. Dr. Rand has been active member and leader in the ACWWA throughout her 20-year career in the water industry. Dr. Rand has served on the ACWWA Board for a decade, progressively taking on greater responsibility including Chair. Dr. Rand has been a recognized leader in the water industry for her technical contributions related to disinfection, and more recently in wastewater surveillance. Under her leadership, the ACWWA Board developed and implemented a new Equity, Diversity



and Inclusion Policy as well as a new EDI committee and chair position. She has published her research in the AWWA Journal, titled "Diversity in the Atlantic Canadian Water and Wastewater Industry." Dr. Rand's contributions to training engineering students and developing a passion for water and the environment are an important contribution to the water community.

**IRA P. MCNAB AWARD – Amy Winchester, P.Eng.**

The Ira P. McNab award is awarded annually to a member for outstanding service to the water industry in Atlantic Canada. The award was established in 1957 when the ACWWA was called the Maritime Branch of the Canadian Section of the AWWA. It is in honour of the late Dr. Ira MacNab, P.Eng., the first president of the Maritime Branch. The 2022 Ira P. McNab recipient, Amy Winchester, has offered the ACWWA outstanding service over many years. Amy began her membership in September 2004. She has held positions of magazine chair, membership director, ACWWA Chair, and positions on the various conference committees including the 2022 conference. She recently assisted in updating and bringing the completed Drinking Water Guidelines to the point of presentation and implementation.



**BEDELL AWARD – Dave Galbraith**

The Bedell Award is awarded by the Water Environment Federation and may be presented every three years to a member of ACWWA to acknowledge extraordinary service to a WEF MA. The award is named for Arthur Sidney Bedell, WEF's second president, for his long devotion and service. The award was first presented by ACWWA in 2009. The recipient of the 2022 Bedell Award is Dave Galbraith.



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Dave works tirelessly for ACWWA and WEF, and has been doing the heavy lifting on behalf of ACWWA for many years as the WEF delegate. Dave's dedication to the ACWWA and WEF is second to none.


## PROJECT OF THE YEAR - SMALL UTILITY - Potlotek First Nation Water Treatment Plant, Potlotek First Nation & CBCL

The Potlotek Water Treatment Plant is a new state-of-the-art facility in an Indigenous community in Nova Scotia that has experienced chronic water quality concerns in recent years that have attracted numerous advisories and negative headlines. The new treatment plant contains redundant Dissolved Air Flotation treatment trains, UV disinfection, GAC absorption, and manganese contactors. The new facility was designed and constructed in partnership with PFN, Indigenous Services Canada, and other stakeholders, and included a comprehensive community capacity-building program and operational support.



sustainability and assisting with long-term planning for the water and wastewater systems. First Nation communities have a desire to maintain or upgrade their systems to national standards, and through this project, communities are better equipped with the knowledge and tools to make informed decisions on their assets. The outcome of the project will provide a guiding tool for proactive planning, thus reducing the amount of emergency response as well as reactive, costly, and oftentimes, inappropriate repairs.

## PROJECT OF THE YEAR - LARGE UTILITY - TransAqua Upgrade to Biological Treatment, City of Moncton & CBCL

The greater Moncton wastewater collection and treatment system was originally constructed as a chemically enhanced primary treatment process with ferric sulphate and polymer addition. CBCL Limited was commissioned in 2014 to plan and design secondary treatment upgrades necessary to meet new federal effluent guidelines. The main objective of the project was to develop a secondary treatment plant upgrade that will meet and exceed the required effluent objectives. This objective resulted in the selection of biological nutrient removal (BNR). However, as the presence of combined sewers within the collection system results in large flow variations in combination with decreased wastewater concentration, step feed variations of the BNR process were investigated. The project was delivered in five phases including preliminary treatment, primary treatment, biological treatment, solids handling, and disinfection. The plant commissioned the liquid train in December 2020, with the remainder of the plant upgrades completed in 2021 and 2022. The project was completed on schedule and below budget. 



## PROJECT OF THE YEAR - MEDIUM UTILITY - Development of Asset Management Plans for Water & Wastewater Systems, AFNWA & Dillon Consulting

The Atlantic First Nations Water Authority (AFNWA) partnered with Dillon Consulting to develop individual Asset Management Plans for 17 communities with the goal of increasing financial



## THE PANEL SHOP

**For further information please contact:**

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Operations Manager, The Panel Shop  
506-455-1925  
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# 2023 ACWWA ANNUAL CONFERENCE



## “BUILDING RESILIENCY”

It has been six years since the ACWWA Annual Conference was last held in the City of Charlottetown. The hosting committee has been working hard to make it another memorable “in-person” event.

This year, bring your ideas on making the Water and Sewer Industry more resilient to Charlottetown. What innovations are you making to your infrastructure and operations to meet future needs? How are you tackling staffing challenges? How are you ensuring the longevity of water and sewer service in your community? What can you offer the industry to ensure long term sustainability?

We are excited for members to come together and share your knowledge and experiences with friends and colleagues in the Water & Wastewater industry. The conference will feature technical sessions, the ABEA Tradeshow, and industry networking opportunities.

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## Oral Presentations

The ACWWA is inviting abstract submissions for the 2023 Conference in Charlottetown, PE. All topics related to the water and wastewater profession will be considered. Presentations will be 20 or 30 minutes in length with 5 minutes for questions.

## Instructions for Submitting Abstracts

Please submit an abstract (maximum length of 300 words), a presenter biography (maximum length of 200 words) and copyright release form at [www.acwwa.ca](http://www.acwwa.ca) by **February 24<sup>th</sup>, 2023**.

Also, please indicate if the presenter is a first-time Young Professional participant at the ACWWA section conference and would like to be considered for the Fresh Ideas program that has been developed through AWWA's Manufacturers / Associates Council and the Young Professionals Committee. The top presentation selected from this group of presenters will be given the opportunity to compete in the Fresh Ideas poster competition at the AWWA Annual Conference and Exposition (ACE 2024) in Anaheim, CA representing the Young Professionals of ACWWA. Along with complimentary conference registration provided by the ACE 2024 organizing committee, ACWWA will provide the winner with a stipend to assist with travel costs to the conference.

## Selection Criteria

Submissions will be reviewed based on the significance of the work / content to a broad audience, originality of the work, new concepts, improvements or new data, technical content, the status of the completeness of the work, and the relevance to the theme of the conference, if applicable. Case studies on new technologies and industry presentations that are innovative / educational are encouraged, however submissions that appear to be marketing material for a particular product or company will not be accepted.

Authors will be notified of the selection of their abstracts for presentation by the end of July 2023.

## Calling All Operators and Students!

We are excited to offer an added incentive for operators. Operators whose abstracts are accepted will have their conference registration waived!

Also, in addition to being considered for the Fresh Ideas program and a chance of representing the Young Professionals of ACWWA at ACE 2024, students whose abstracts are accepted will have their conference registration waived.





## A successful gathering

We want to say a huge Thank You! to all our ABEA Members for their continued support – without you we could not support the ACWWA in the manner we do.

The 2022 ACWWA Conference is in the rearview mirror, and we are pleased to report it was a great success – both well attended and received with open arms and minds. We kicked things off with a well-attended but nippy golf tournament on Sunday morning – fall was in the air as our 81 golfers hit the greens.

After a COVID hiatus we were all glad to see each other and have a personal connection – Atlantic Canadians like to have that “kitchen party” atmosphere wherever we gather, and for whatever reason.

The ABEA were a large supporter of this year’s Conference events, hosting the golf tournament, the Monday evening hospitality venue at the Saint John Ale House,



the Tuesday morning Trade Show, and the Tuesday evening entertainment sponsor.

The ABEA continues to offer four x \$1,000 academic scholarships annually to deserving individuals who meet the application criteria (visit [www.ABEA.biz](http://www.ABEA.biz)). It is never too early to start preparing.

Education is an ongoing process and our membership continue to find ways to assist their customers with creative delivery methods to keep them informed of changes in the industry. If you have a need, please feel free to reach out. We are certain that we have something to meet your needs on an individual basis, or we can create a program in conjunction with the ACWWA Education Team. 🤝

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



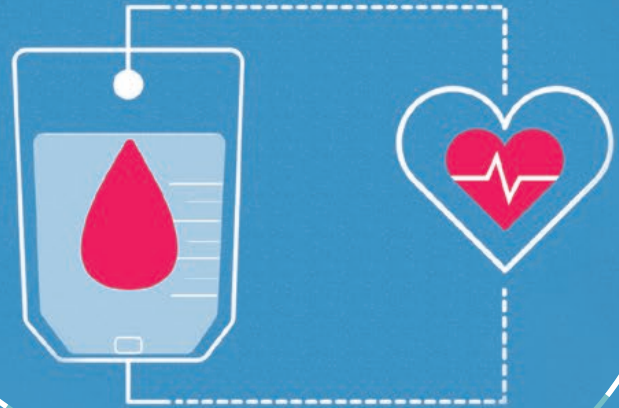
Contact information for our members, and applications for our Scholarship and Grant Program can be found at

[www.abea.biz](http://www.abea.biz)





# Team ACWWA Blood Drive



In March 2022, the ACWWA community lost a friend.

Danny Whiting passed away fighting a long battle with brain cancer. Over the past ten years, Danny and Clara have been donating blood in honour of Jonah Wynn MacCharles, a dear friend's baby girl who passed away (in 2012). They did this because blood donation has both an immediate and a lasting impact on the preservation of life.

Now its our turn to honour them.

ACWWA is creating Team ACWWA with Canadian Blood Services. Joining the team allows you to donate in Danny's honour at any Canadian Blood Service location.

Please sign up to donate blood using the Team ACWWA QR code or website link.

Giving blood was important to Danny and his family. The same, we know, goes for water.



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# PROJECT SPOTLIGHT

## TOWN OF THREE RIVERS WATER AND WASTEWATER MASTER PLANS

**Project Owner:** Town of Three Rivers, PEI

**Engineers:** CBCL Limited



### ► PROJECT OVERVIEW

In 2018, the Town of Three Rivers (the Town) was formed through the amalgamation of several towns, communities, and rural areas, generally comprised of the communities of Brudenell, Cardigan, Georgetown, Montague, Lower Montague, Lorne Valley, Valleyfield, and the surrounding rural areas. In recent years the Town has seen a steady population growth of 2.0% and it is expected that this growth will continue as the communities continue to support one another. Currently the Town owns and operates a centralized water and wastewater system for the Community of Montague and a wastewater collection system for the Community of Georgetown. A water system for domestic use only exists for the Community of Georgetown but is owned and operated by others.

In 2021 the Town engaged CBCL to prepare Water and Wastewater Master Plans for the communities of Montague, Georgetown, and Cardigan. The objective of the project was to identify potential issues within the various existing systems and plan for future growth. Estimated future growth rates, water demands, and wastewater flow projections were determined based on previous Statistics Canada Census data and the zoning of suspected growth areas, and existing operational data. This project focused on the following areas:

- Understand the existing water and wastewater infrastructure of the Town.
- Identify issues with existing infrastructure meeting current needs.
- Continue to provide customers with a safe, effective, and efficient supply of water and wastewater services, balanced with responsible financial planning.

- Review potential growth areas and future servicing extension areas.
- Understand how growth may affect the future municipal and servicing boundaries.
- Understand what the future infrastructure needs will be for the Town's infrastructure systems.
- Develop a list of recommendations to meet current and future needs.

### ► CONDITION AND NEEDS ASSESSMENT

A high-level desktop condition assessment limited to material type and age of infrastructure in conjunction with a small sample of field condition verifications of the existing linear infrastructure was completed as part of the scope of this project. Additionally, a needs assessment for the community of Cardigan was completed since there is currently no existing municipal infrastructure within the community.

### ► SANITARY SYSTEM MASTER PLAN

Currently, the Town contains over 30.5 km of gravity sanitary sewer, 1.2 km of sanitary forcemain, six sanitary lift stations, an extended aeration activated sludge plant, and a partially mixed two-cell facultative lagoon with UV disinfection between the communities of Montague and Georgetown. A hydraulic model of both dry and wet weather flows of the existing sanitary systems were created using theoretical average daily and extraneous flows based on the Atlantic Canada Wastewater Guidelines Manual and calibrated based on observed daily flows at each lagoon and sanitary lift station. The hydraulic models were then used to identify existing system constraints, estimate future system demands, review the impact of potential servicing expansions to accommodate growth within the Town, and provide recommendations and order of magnitude costing on future upgrades.



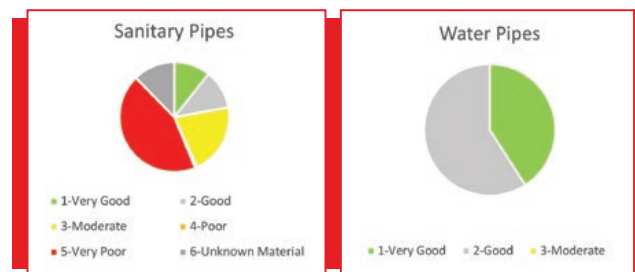
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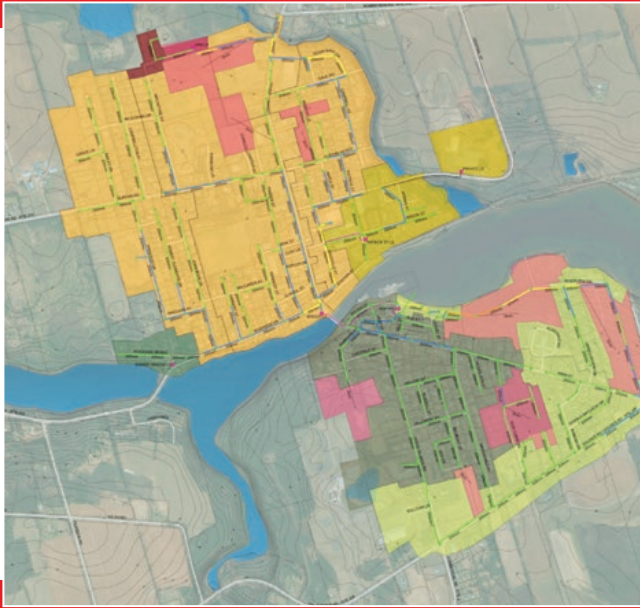
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► **WATER SYSTEM MASTER PLAN**

The Town owns and operates a water system for the community of Montague that consists of two wells, an inground storage reservoir, fire and domestic booster pumps, and approximately 21 km of distribution mains. Despite being owned and operated by others, the domestic use water system in the community of Georgetown was also assessed as part of this study. A hydraulic water model for both the Montague and Georgetown systems was developed based on record information and system demands were established from available water meter data. The hydraulic models were then utilized to analyze the systems under various existing and future demand scenarios to identify existing system constraints and potential future capacity upgrades.

► **PROJECT OUTCOME**

The results of the water and wastewater master plans identified constraints and/or limitations within the various water and wastewater systems, developed an infrastructure plan for future growth within the communities, and prioritized short-term future planning for financial considerations. ☁



**IN RECENT YEARS THE TOWN HAS SEEN A STEADY POPULATION GROWTH OF 2.0% AND IT IS EXPECTED THAT THIS GROWTH WILL CONTINUE AS THE COMMUNITIES CONTINUE TO SUPPORT ONE ANOTHER.**



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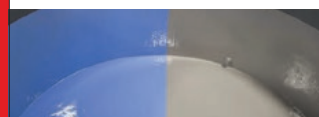
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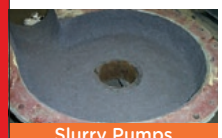
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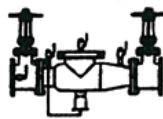
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# ACWWA's IDE Committee

# EVERYONE MATTERS.

The ACWWA Inclusion, Diversity, and Equity (IDE) Committee was established in 2018 with the goal of assisting the ACWWA in creating an inclusive, diverse, and equitable membership and to establish an organizational environment that recognizes, encourages, celebrates, and effectively utilizes each individual member's talents.

Since 2018, the IDE Committee has worked with researchers at Acadia University to better understand how ACWWA can improve and retain representation within the water industry. Through that collaboration, a phased mixed-method study was conducted using

two surveys (quantitative and qualitative) to evaluate IDE in the association. Results quickly showed that there were more respondents who identified as male than female; however, the gender gap decreased for respondents under the age of 45 and showed gender parity, with exceptions in some subsets of the industry (Figure 1).

The final report contains many key recommendations and action items for the Atlantic Canadian water industry such as inclusive networking opportunities, formal mentorship programs, increased and intentional engagement with underrepresented groups,

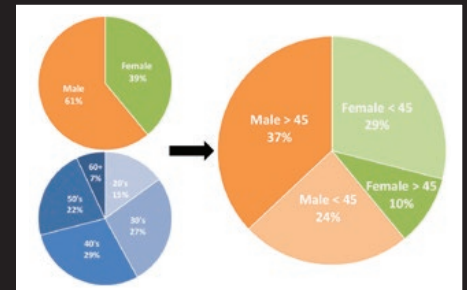


Figure 1. Snapshot of IDE survey demographic results.

EDI training for members, and many more. A summary of the results and key takeaways from this initiative were recently published in Journal American Water Works Association, volume 114 (<https://doi.org/10.1002/awwa.1844>).

The ACWWA IDE Committee continues to focus on important issues for members and will be using these recommendations and new knowledge to further build inclusion and diversity within the association and water industry. The committee encourages anyone who is interested in learning more about the initiatives or who would like to join the committee to please contact the committee chair, Dallys Serracin, for more information [dallys.serracin@dal.ca](mailto:dallys.serracin@dal.ca).

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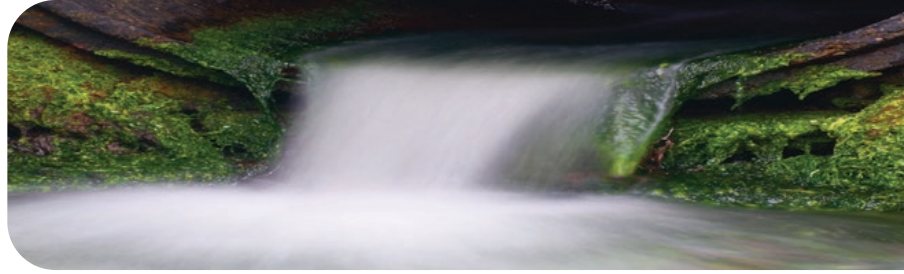
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# Addressing Wastewater Overflows

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As an effort is made by regulators to reduce the environmental impact of overflows from wastewater systems, system owners are working to quantify required information and improve systems to meet the new guidelines. Typically, wastewater overflows occur during wet weather, with stormwater entering the system. Stormwater loading can be much greater than wastewater loading within a sewer.


Guidelines have been prepared which state that development in an area cannot result in an increase in sewer overflows. To allow development to take place and reduce environmental impact, overflows must be quantified and monitored over time, demonstrating that no net increase is anticipated. Ideally, this can be completed with a long-term flow monitoring program, with special attention to sections with overflow infrastructure. Reasonable flow approximations can be made based on pumping station runtime data however if monitoring is not available. If pump discharge rates and the water level in station wet wells over time are known, flow in and out of the station can be estimated. Overflows are indicated when the water level in the wet well reaches overflow infrastructure. A significant portion of overflows typically occur at pumping stations as they are located low in the system and have a limited capacity, making the stations well suited to this analysis.

There are two possible strategies to reduce the frequency and volume of overflows in a system. First, additional capacity can be built into a system to either convey peak flow or storage can be provided during peak events to reduce flow in the system. This method is effective; however, it requires significant infrastructure investment

which must be maintained, operated, and renewed. This impact is relatively minimal for gravity components which may require a marginal increase in pipe diameter, however, pumping stations and treatment plants have significantly higher life-cycle costs for larger flows.

The second strategy is to divert stormwater from the wastewater system, reducing peak flows. This can be an effective method in reducing overflows when significant sources of stormwater are identified and can be discharged to a stormwater collection system or overland. Catch basins in low points or pick-up pipes accepting overland flow which can be disconnected greatly reduce flow in the system. When there is a suitable overland or piped stormwater route nearby, disconnection of these components may be as simple as a relatively short storm system extension. Stormwater contributions from any significant impermeable

area typically contribute the most flow; even disconnecting roof leaders and discharging them to the ground surface can be an effective strategy.

When the magnitude of overflows can be measured or approximated, a strategy to address the overflows and even allow for future development can be implemented. Comparing peak flows during wet weather to overflow events and reviewing the system for significant stormwater sources allows system owners to make informed decisions addressing overflows. When stormwater can be removed from the wastewater system at a reasonable cost, these removals will provide significant capacity in the system. Where removal is not feasible, capacity upgrades to the system should be considered. 

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