

# GO with THE FLOW

THE OFFICIAL PUBLICATION OF THE ATLANTIC CANADA WATER AND WASTEWATER ASSOCIATION

## 2019 ACWWA ANNUAL CONFERENCE RECAP & AWARDS

HALIFAX | OCTOBER 6-8

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### INSIDE:

- Geotextile Sludge Management System Provides Savings for North Rustico WWTF
- ACWWA's New Inclusion, Diversity, and Equity Committee





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## Engaging and growing our membership

Where to begin? As your new Chair of ACWWA 2019–2020 I must say that I am excited about the year ahead! I have enjoyed being active in ACWWA over the years and I look forward to meeting new members and recruiting new members in 2019–2020.

For those of you who attended this year's conference in Halifax, I am sure you are with me in saying the entire organizing committee, led by Wendy Krkosek and John Eisnor as the Conference Co-chairs, put together an excellent conference. Sincere thanks also go out to our Executive Director Clara Shea for all the great work she does leading up to, during, and after the conference.

The YP Seminar on Sunday was a welcome addition by many and ABEA hosted another excellent trade show that was highlighted by some unique entertainment and an evening filled with great music and games. The technical program was filled with a wide range of interesting and educational topics, which was kicked off by the newly introduced Leadership Lineup. For anyone who missed a presentation they are all posted on the ACWWA website.


The water tower building competition had another successful year with lots of teams and one outstanding tower! The weather cooperated with the 5 km fun run/walk allowing those participating to enjoy the beautiful Halifax waterfront – a great event that supported Water For People. I must say there was a great turn out (I tried to

“Getting involved allows you to meet new people, network, learn about other careers, and learn from other professionals.”

keep up with Carl Yates and a number of others – bottom line, more training necessary for me). To cap off a great conference was the Down East Feast with entertainment by Atlantic Cirque.

AWWA representative Theresa O'Grady, WEF representative Thomas Kunetz, and CWWA representative Robert Haller were all very impressed with the quality of the conference and I understand planning is well underway by Greg McCann – Conference Chair and the rest of the Committee for next year's conference in Fredericton.

As I look to the year ahead I am excited about the opportunity we have as a strong association to share the value we have as being members to help grow our association and support others in our region who are in the water and wastewater business. Membership in ACWWA brings many benefits; to name a few: Go With the Flow, a broad supportive network of professionals, the Annual Conference and Trade Show, the section Library (if you are not familiar with it, ask Clara) and numerous educational opportunities annually. Even more benefit can come from getting involved in the association like so many of our great volunteers do. Getting involved allows you to meet new people, network, learn about other careers, and learn from other professionals. So whether you are a young professional, a seasoned professional, a supplier, a consultant, a utility, or a regulatory agency I encourage you to speak to those who are not members and share with them the benefits of ACWWA membership and I encourage each of you to consider getting engaged in a committee and volunteering.

When you raise your hand and get involved, ACWWA allows you to further grow both personally and professionally and to give back to this amazing industry that we are all a part of. 



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## Your valued contribution to AWWA

The decade is drawing to a close following a busy fall of 2019!

There is a current trend to be somewhat reflective of the current decade as we draw near the close of 2019. Over the past decade, the Canadian water sector has undergone significant regulatory and technological changes. For example, in 2009, I attended some very focused (i.e., small) workshops where academics discussed lead in drinking water and over the past month lead in drinking water is national news. AWWA, over the past decade, has produced some key resources on lead in drinking water that are both

“This conference was highly successful in showing some new ideas and was a great opportunity to connect with familiar and new faces in the water sector.”

technically oriented and for the general public. As well, ACWWA has conducted training courses on corrosion for its members and had many presentations on lead at its Annual Conference.

In the past few months our Section has been very busy working to set the agenda for water management for the next ten years! First, our

Section hosted the Regional Meeting of Section Officers (or RMSO) held in Halifax, NS (September 6–7). Not even Hurricane Dorian could hold the team back from excellent discussions that aimed to understand and remind ourselves of the tremendous partnership and value between AWWA and its member sections.

Another important event for our Section was the ACWWA Annual conference – which took place October 6–8 in Halifax, NS. This event maximized attendees from across the water sector – from inspired young professionals to utility operators. Overall, this conference was highly successful in showing some new ideas and was a great opportunity to connect with familiar and new faces in the water sector.

In November 2019, I started my new role as Chair of the Canadian Affairs Committee (CAC). The Committee also welcomed a new member from Atlantic Canada – Todd Richard, and sent a warm thank you to Roland Richard for his years of service on the committee. The CAC meeting was held in Banff, AB and was a great opportunity to discuss pressing items that are facing the water sector such as lead, PFAS, and many other technical items.

So as we near the end of 2019 and reflect on your decade of accomplishments – one you should note is your valued contribution to AWWA. 🌊



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## Our successful events

While at WEFTEC 2019, in Chicago in September, I attended several delegate meetings. Many positive things are happening at the Water Environment Federation. The new Diversity & Inclusion Task Group is starting up and they will have updates next year. The WEF InFLOW Program (Introducing Future Leaders to Opportunities in Water) is continuing to grow in interest and attendance since its creation in 2018.

Sponsorship of the WEF InFLOW Program supports a WEF initiative that strives to identify promising students and young adults from underrepresented groups who are interested in professional careers in the water industry. The WEF InFLOW Program is projected to provide support for up to 50 university students and recent high school graduates. Sponsorship support provides travel assistance, hotel accommodations,

registration, and additional networking opportunities. If you would like to learn more, please get in touch.

I am now on the WEF Nomination Committee, WEFMAX Committee, and also have been asked to Chair the WEF House of Delegates Working Group focusing on Stormwater and the Green Infrastructure Certification Program. More will be shared next year after we have a chance to research the topics. WEF is also excited about the soon-to-be released documentary, Brave Blue World... if you were at the 2019 ACWWA Conference Awards Luncheon in Halifax, you would have seen the video trailer presented by WEF's Past President, Tom Kunetz. [www.braveblue.world/projects](http://www.braveblue.world/projects) [www.youtube.com/watch?v=T1Ju352d9Z4&feature=youtu.be](http://www.youtube.com/watch?v=T1Ju352d9Z4&feature=youtu.be)

With 22,500 registrants, the Water Environment Federation's 92nd



L to R: Walt Marlowe, WEF Executive Director; Robert Haller, CWWA Executive Director; Lisa Ruane, WEF Sr. Director, Association Engagement; Tom Kunetz, WEF Past President

annual technical exhibition and conference drew one of the largest crowds in a decade as it continued to live up to its billing as the world's largest annual water quality event.

WEFTEC 2019 also featured 992 exhibitors using 294,000 net square feet of space to showcase the latest developments, technologies, and services for the water sector.

"The spirit of WEFTEC 2019 was amazing to experience," said WEF Executive Director Walt Marlowe. "Each year brings a unique energy to WEFTEC, and we are proud to continue to connect and engage water professionals."

As a very early reminder: WEFTEC 2020 will be held Oct. 3 to 7, 2020 at the New Orleans Morial Convention Center in New Orleans. Planning is underway already, and 795 companies have reserved more than 284,000 net square feet of space.

Shortly after returning from Chicago, I attended the ACWWA

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Annual Conference in Halifax. A huge shout out to the organizing committee and volunteers who worked so very hard to ensure we all had a full program. I had the opportunity to sit in on several sessions that were very well attended. Looking forward to next year's conference.

The three WEF representatives attending wanted me to express a sincere appreciation for the tremendous hospitality they received from everyone in Halifax at our Annual Conference. This was the very first WEF MA (Member Association) Conference that Walt Marlowe, WEF Executive Director, attended and he could not say enough nice things to say about ACWWA. Since he was born in PEI, it was only fitting that his first MA Conference was in Atlantic Canada.

Lisa Ruane, WEF Sr. Director, Association Engagement, was very impressed of the natural beauty of our region, loving all the fall colours while flying into the Halifax Airport. Lisa had opportunities to speak with several people and learned a great deal about the people of Atlantic Canada and many of our ideas will be presented to WEF Headquarters.

Tom Kunetz, WEF Past President, was over-the-moon impressed with

Clara and our entire Association. Tom also joined in the "5k Water For People Fun Run/Walk" along the Halifax Boardwalk. Tom has been to many conferences over the years and said that this one will be remembered as one of the best! After the conference, Tom travelled in the area for a few days, hiking and exploring and headed towards the Cabot Trail... he sent me a text message from the road and said he would love to live here. What a great compliment for our region.

I am very fortunate to have been able to spend some free time with the WEF folks and to get to know them a little better. We had a nice supper at the Bicycle Thief one evening and shared a lot of laughs with our very good friend Robert Haller, CWWA Executive Director. It is important that we maintain a close connection with WEF and the CWWA so that our small but mighty voices are heard at the national and international levels. I'm sure everyone at WEF knows who the Canadians are by now. It wouldn't be a trip to Halifax without a trip to Pizza Corner... so Robert and I took Tom out for his first donair!

A great way to end the conference! 🍷



Tom Kunetz, WEF Past President with Dave Galbraith at the Water For People 5k Fun Run/Walk



L to R: Robert Haller, Dave Galbraith, and Tom Kunetz; Pizza Corner donairs!



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## CWWA – U.S. alliance

Greetings to all and I hope we are all enjoying a nice white winter. It is both a sad and happy time for me, as I prepare this article, I realize this will be the last one I prepare on CWWA updates because by the time you receive this winter issue of *Go With the Flow* your new CWWA representative will be officially established in his new duties. Please extend a warm welcome to Todd Richard as your new ACWWA Government Relations Director and representative on the CWWA Board. I have truly enjoyed my time actively involved with ACWWA in this role and it has been a wonderful experience. Thank you very much for the opportunity to serve in this role.

Recently, Robert Haller, CWWA's Executive Director, articulated the importance of CWWA's relationship with its U.S. related associations. This article will try to share with you the overview of the U.S. relationships and their importance to CWWA.

Canada's relationship with the U.S. has always been a most unique and the most important international friendship. For CWWA, the U.S. relationships play a big part in which we are at CWWA and an important part in what we do. We are a completely independent corporation, as is WEF, AWWA, and NACWA. But we all have guiding MOUs with each other to enshrine our cooperation and we have become effective partners on so many fronts regarding advocacy, the value of water, and utility leadership.

Earlier this year, CWWA signed an MOU with our new partners at NACWA – the National Alliance of Clean Water Agencies. Robert Haller was invited to Washington, DC to participate in their annual "Fly-in" and was able to sit in on their board meeting and observe their advocacy efforts on Capitol Hill. NACWA has been a most critical

partner in CWWA's efforts to address flushable wipes and is supporting our Climate Change committee on a new, national survey project.


The greatest sign of the strength of our friendship with these U.S.-based organizations has been their 100% support for our bid to host the IWA World Water Congress in 2022. WEF and AWWA each provided video clips supporting CWWA's bid and that support continues as we develop an exciting, utility-relevant program for Toronto in 2022. They have all committed to supporting us to welcome the world to North America.

CWWA's legal membership is a corporate membership, but the "real" membership is made up of individuals. Almost every one of these individuals is a member of WEF or AWWA (or both) first. This is where our "profession" begins. Their support for the water/wastewater individual is critical to one's professional development from operator to senior utility leader, from student to renowned academic or respected regulator. You gain and retain your professional credentials through their training and resources and you build your professional networks through active involvement in your provincial/regional section or member association. Of course, direction from these organizations comes from their U.S. headquarters. CWWA was formed to create a wider, national network for Canadians and to facilitate an east-west dialogue on critical national issues and federal policies. We work in support of, and in conjunction with, the AWWA Canadian sections and WEF member associations. This relationship is strengthened by each having a director named to our CWWA Board of Directors.

I hope this will help provide an overview of CWWA's respective roles and strategic alliances with our U.S. partners.

### Other CWWA collaborations

CWWA continues to facilitate cooperation amongst many national water organizations such as the Canadian Water Network, Canadian Association for Water Quality, Canadian Public Works Association, Canadian Water Resources Association, Canadian Network of Asset Managers, Public Sector Digest, the Federation of Canadian Municipalities and more. As CWWA addresses federal legislation and policies, CWWA also works to strengthen the collective voice from this municipal water sector.

Should any information be required on CWWA activities or initiatives, I invite you to contact Todd Richard at [todd.richard@town.windsor.ns.ca](mailto:todd.richard@town.windsor.ns.ca) or visit the CWWA website at [www.cwwa.ca](http://www.cwwa.ca). 

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## Membership benefits

Once again, we had a very successful photo contest. It is amazing to see the quality of photos submitted every year. Congratulations to our winners, Julie DiCicco, Dillon Consulting (top prize), Gabriel Belliveau, City of Dieppe (first runner-up), and Sylvie Morton, Province of New Brunswick (second runner-up). Thank you to all our members who take time to

submit photos for the contest. We hope that you will all enjoy the membership appreciation calendar sent to you in November created with photos from the contest.

For the second year in a row, the Membership committee launched a contest at the Annual Conference in Halifax. Jennifer Bursey, from CBCL Saint John's, NL won herself a \$100

gift card for becoming a new member and Greg Sheppard, from CBCL Saint John's, NL won a \$50 gift card for having recruited a new member. Thank you to all who participated and don't forget that our refer-a-member contest runs quarterly all year long.

If you refer a member, you have a chance to win a \$50 gift card of your choice.

### Welcome to our new members

Name	Organization	Membership
Jarvis Singer	Halifax Regional Water Commission	WEF
Kyle Rauch	Dalhousie University	WEF
Dean Gurney	Eden Valley Poultry Inc.	WEF
Kyle MacIntyre	Dillon Consulting	WEF
Barry Casey	Eden Valley Poultry Inc.	WEF
Linggang Zou		AWWA/WEF
Todd Richard	Town of Windsor	WEF
Jordan Schmidt		WEF
J Derek Quigley	Omnitech Inc.	WEF
Louis De Montbrun	Halifax Regional Water Commission	AWWA
Craig Dixon	Village of Sussex Corner	AWWA
Derek Taylor	Taylor's Plumbing & Heating Ltd.	AWWA
Jason Stone	Town of Grand Falls Windsor	AWWA
Kirk Verran	Town of Middleton	AWWA
Jennifer Bursey	CBCL Limited	AWWA

An error slipped in the last edition of the magazine and some of our new member information was incorrect. The list below shows the corrections.

Dave Hiscock		AWWA
Charlie Hamlyn	Town of Portugal Cove-St. Philips	AWWA
	Town of Yarmouth	AWWA
Chad LeBlanc	Town of Yarmouth	AWWA
Brian Peach	Town Council of Pouch Cove	AWWA
Naveed Majid	Freelance Environmental Inc.	AWWA
James Carew	Veolia	AWWA
Darlene Fenton	Halifax Regional Water Commission	AWWA
Lesley Shea	Aqua-Check Inc.	AWWA
Meaghan MacGillivray	Dalhousie University	AWWA

### As of October 25, 2019

Total AWWA active members: **423**

Total AWWA late members: **22**

Total active WEF members: **108**

Total WEF late members: **24**

### Did you know?

In appreciation for all you do, AWWA members can now use a promo code "THANKYOU" to receive 20% OFF your next AWWA store purchase\*, now through December 31, 2019. 🎁



# 2019 ACWWA Photo Contest

## WINNERS



1<sup>st</sup> Runner Up  
Gabriel Balabanek  
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Top Prize  
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2<sup>nd</sup> Runner Up  
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Province of New Brunswick



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## The year in review

With the 2019 ACWWA Conference (Halifax) in the rearview mirror we would like to share our year in review.

### 2019 Annual ACWWA Conference

Golf on Sunday was held at Lost Creek Golf Club and we had 95 participants. The weather cooperated and a good time was had by all. We would like to take this opportunity to thank our 62 host suppliers for their continued support, as well as our individual “Hole” sponsors. They allow us to present a premiere event.

Monday saw us gathering at the Schooner Room of Casino NS for our Common Hospitality Event, where we were entertained by Monkeys Uncle. The addition of some side attractions seemed to be a hit.

The Tuesday morning Trade Show presented 84 booths. We stayed the course of our “support local” mandate and purchased wild blueberry jam and maple syrup from Acadian Maple Products, to share with the Trade Show attendees.

We look forward to hosting another successful event in 2020: **October 18 – 20 in Fredericton, NB**. The planning has begun. Mark your calendars.

### ABEA Academic Scholarships

This past year we supported three students with our ABEA Scholarship. Kyle Brewer (Trent Brewer, City of Fredericton), Jaiden Penney



(Chad Penney, City of Fredericton), and McGuire Richard (Todd Richard – Town of Windsor).


We are into the 2019/20 academic year, so now is the time to plan for the April deadline. We support four x \$1,000 scholarships annually. See the application process on [www.ABEA.biz](http://www.ABEA.biz).

### ABEA Annual Attendance Grant

We regret that there was no uptake this year but are looking forward to hosting successful Grant applicants at the Fredericton Conference in 2020.

The Grant provides an opportunity for those affected by economic challenges who see the value in attending the ACWWA Conference. The application can be found at [www.ABEA.biz](http://www.ABEA.biz).

### 2019/20 ABEA Board:

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 President – Eric Landry  
 Vice-President – Ryan McCashion  
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# 2019 ACWWA ANNUAL CONFERENCE HIGHLIGHTS

Halifax, NS

By Wendy Krkosek and John Eisnor

The 72nd Annual Conference of the Atlantic Canada Water and Wastewater Association took place from October 6 to 8 at the Halifax Harbourfront Marriott on the beautiful Halifax Harbour. The bustling downtown core of Halifax was as exciting and vibrant as ever, matching the energy levels throughout the conference. Conference Co-Chairs Wendy Krkosek and John Eisnor of Halifax Water were thrilled with the overwhelming success throughout the conference with many events reaching capacity. Attendees took advantage of the top tier technical sessions to expand their knowledge-base and the numerous networking opportunities to meet new members of the industry and to reconnect with colleagues.

The conference theme, “Preparing for the Unknown,” was matched with its name, “Uncharted Waters.” This theme was felt throughout the conference during technical sessions that discussed effective leadership in a digital age, new factors impacting drinking water quality, urgent repairs to critical infrastructure, and much more.

The excitement began on Sunday morning as golfers teed off at the Lost Creek Golf Club in Beaver Bank. The cool morning turned to a warm afternoon making for a great day of golf. The more technically-inclined conference attendees crossed the harbour to Dartmouth to visit the site of the new Lake Major Dam as it neared completion. Halifax Water engineers described the challenges involved, the innovative design, and the circumstances that led to the replacement of the aged dam. The Young Professionals Mixer followed that evening at The Lower Deck, a

drinking establishment famous for its Nova Scotian folk music and diverse clientele. Conference attendees then turned their attention to the Conference Meet & Greet back at the Harbourfront Marriott to connect with new friends, meet with old colleagues and companions. Those who dared entered the Greatario Water Tower Competition to test their skill and ingenuity while working with limited (and unique) resources, not only against the clock but also the competition.

Monday morning marked the official opening of the conference with breakfast served, followed by the Opening General Session. Attendees were welcomed to Halifax by Mayor Mike Savage and then enthralled by the keynote speech, from none other than Carl Yates, the recently retired General Manager of Halifax Water after more than 30 years of service.

The technical sessions were kicked off with The Leadership Lineup, two non-technical sessions from inspiring minds. The first from Stella Bowles, a Nova Scotian teen whose actions prompted the cleanup of the LaHave River, which contains alarmingly high levels of fecal contamination. Stella has raised more than \$15 million in funding from three levels of government in just three years. This inspirational session set the tone for two days, packed with informative and lively technical sessions. The technical sessions were followed by the ACWWA Annual General Meeting & Awards Luncheon, where our annual award winners were recognized for their excellent work. More than 32 attendees took part in the Water For People 5K Fun Run/Walk through a route that showcased the stunning Halifax

Waterfront, the Farmers’ Market, and the historic downtown core. After an opportunity to explore the wide range of culinary options in Halifax, the crowd grew in the Schooner Room at Casino Nova Scotia at the ABEA Common Hospitality Reception. A live band, arcade games, virtual reality, and pub fare around the room made for an exceptional evening.

On Tuesday, the technical sessions resumed with an early-bird round before the tradeshow, followed by the Best of the Best Tap Water Taste Test hosted by CBC’s Colleen Jones, where Collins Park Water Supply Plant in Wellington, NS, took the top spot of ten entrants from across the Atlantic Region. As the taste test wound down, the ACWWA/ABEA Tradeshow ramped up with more than 80 exhibitors filling the exhibition booths. This year saw new heights in interest in the tradeshow with nearly a dozen vendors on the waitlist for booth space, making this the most sought-after ACWWA tradeshow to date. If that wasn’t exciting enough, a daring act from Atlantic Cirque performed in the tradeshow space, drawing a crowd from all corners to view the three skilled acrobats. That evening, the famed Down East Feast began, and a divine meal was accompanied by more Atlantic Cirque performers with an interpretive acrobatic display and contortionists showcasing their skills and amazing the audience.

The 2019 ACWWA Conference Committee would like to give their thanks to everyone and every organization who attended or contributed to this conference. We sincerely hope that you enjoyed your time in Halifax and that you visit us again soon. We look forward to seeing you all in Fredericton next year!

# OUR 2019 AWARD WINNERS

**SILENT HERO** (Prince Edward Island)  
BLAINE PARKMAN, Charlottetown



Blaine Parkman has been an employee of the City of Charlottetown since 1987, where he began as a maintenance construction worker and later became a utility foreman in 1995. Blaine is a level two water distribution and wastewater collection operator. Blaine's depth of knowledge is an asset when training new employees, always with an eye on proper procedures and safety first. He is quick to adapt, takes pride in his work, and is always looking for a new challenge, whether at work or in his personal life.

**SILENT HERO** (Newfoundland Labrador)  
JASON PHILLIPS, St. John's



Jason Phillips is a level four Water Distribution and level three Wastewater Collection certified Manager of the Water and Wastewater Division with the City of St. John's, NL. Jason has been with the City since 2005, where he started in his position as Infrastructure Engineer, transitioning to his

current position in 2013. Jason is a valued contributor to the annual Clean and Safe Drinking Water Workshop held in Gander, NL. Beyond the daily commitment to his utility, Jason has served on past conference committees, as well as being Conference chair in 2015. This year will see Jason step into the role of second vice-chair with the ACWWA Board.

**SILENT HERO** (Nova Scotia)  
NIGEL CROUSE, Halifax Water



Nigel Crouse is a level four Wastewater Treatment Supervisor with the Halifax Regional Water Commission, at the Mill Cove Water Pollution Control Plant.

Nigel has been described as conscientious, hardworking, and dedicated. These attributes are visible in the manner with which he operates his facility; to not only meet standards, but to exceed when and where possible, to minimize the facility's environmental impact. His team-driven approach leads to efficient operations and an environment where knowledge is sought out and shared.

Nigel is a natural leader that values his staff and co-workers. He places safety as a top priority, and is a champion in that regard, serving on safety committees, and acting as a knowledge resource on safety-related topics.

Nigel embraces change, and is always eager to take on projects

both at the facility and within the organization as a whole. Nigel is a credit to his profession.

**SILENT HERO** (New Brunswick)  
JASON LECLERC, Saint John



Jason LeClerc is a level four Operations Manager with the City of Saint John, NB. Jason has been described as an excellent communicator, a self-starter, a natural leader, and always with an eye on safety. Jason is committed to providing the highest level of service and is continually looking for ways in which to enhance that service and system performance. In two and a half years he has implemented a review of opportunities to further strengthen the water transmission system.

**VOLUNTEER OF THE YEAR/CONTRIBUTION AWARD**  
WENDY KRKOSEK, Halifax Water



Wendy continues to play a significant role in the ACWWA. She has served as a committee chair, director, and over the past year has been the 2019 Annual Conference co-chair. Wendy, as Technical Director, also went well beyond

# OUR 2019 AWARD WINNERS CONTINUED

her regular duties to help prepare an RFP for the new Atlantic Canada Guidelines. She did extensive work in submitting funding proposals to the NRC, which were successful, and has committed to seeing this project through over the next couple of years.

**YOUNG PROFESSIONAL AWARD** (AWWA or WEF)  
LINDSAY ANDERSON,  
Dalhousie University



Lindsay is a very motivated, energetic individual who always has a positive attitude, and a great smile. Lindsay has been an ACWWA member for several years, and has taken on many different roles. Her determination has created a positive impact on the ACWWA by increasing membership, engaging the membership, and strengthening the YP committee/community.

**FRESH IDEAS**  
BAILLIE HOLMES



Baillie Holmes won the Fresh Ideas Award for her excellent presentation titled Understanding Factors Influencing Harmful Algae Blooms in a Headwater Lake in Cumberland County, Nova Scotia, Canada. Baillie will represent ACWWA at ACE next year in Orlando, Florida.

Baillie completed a Bachelor of Science in Environmental Science at Acadia University where she first began researching environmental change. After finishing her degree, Baillie became a project coordinator for the Paleo-Environmental Lab at Acadia where she directed an interdisciplinary environmental monitoring program on a barrier beach and lagoon complex in Pictou Landing First Nation. She is now a Master of Applied Science Student at Dalhousie University, studying factors influencing harmful algae blooms in rural headwater lakes under the NSERC ASPIRE program.

**SS SHOVEL RECIPIENTS**  
TOM KUNTEZ  
THERESA O'GRADY  
STEVE GREGORY  
JOHN LAM  
WALT MARLOWE  
LISA RUANE

**FULLER AWARD**  
MIKE CHAULK



Mike is the Manager of Process Engineering with CBCL Ltd. in Halifax. Mike holds Bachelor's and Master's degrees in Environmental Engineering from Dalhousie University. Shortly after completing his Master's degree, he joined Zenon Environmental where he was key to developing and applying new membrane process designs. Fortunately, Mike returned to Halifax and has been a driving force in the Atlantic Canada water

industry where he has been involved in the design and implementation of many water treatment and water distribution projects. Mike has also been a very active member of the ACWWA, where he was Chair of the Association in 2016–17, Chair of Water For People in 2010–12 and the Education committee member for 15 years, as well as supporting many other committees and initiatives.

**IRA P. MACNAB AWARD**  
TOM CAMERON  
CATHY CAMERON



The recent 2019 ACWWA Conference in Halifax marked a unique occasion in the history of this award, as this year's recipient was not one individual, but two. It was deemed appropriate to have two recipients this year, as Tom and Cathy Cameron are a team in the truest sense of the word, in business and in life. Their long history of service, support, and involvement with ACWWA made them a natural choice for this award. Over the years, they have been tireless volunteers for both ACWWA and ABEA, and have served on the Board of Directors in each organization. Without people like Tom and Cathy giving tirelessly of themselves to get things done, organizations like ACWWA simply cannot thrive as they do. They are the owners of Scotia Tech Fluid Services Ltd. and Aqua Data Atlantic Inc., both of which are ABEA member suppliers that are based in Dartmouth, NS.



**JOHN LECHNER AWARD**

DARYL MCLENNAN




The John Lechner Award is an award of excellence to recognize a Section Service Provider Member who has demonstrated exemplary service to the drinking water community and to ACWWA and AWWA's Mission and goals. This is the first time the John Lechner Award has been awarded by ACWWA. Daryl McLennan has been an important part of the water community in Atlantic Canada for many years. Daryl started McLennan Sales in 1969 out of a single car garage in his home in Saint John. In the '80s he moved the operation to Burnside Industrial Park in Dartmouth. In 1988 Daryl sold his company to EMCO, becoming the Vice President for Waterworks Canada. In 2011, McLennan Sales implemented its annual training

program to assist in the Continuing Education Program for Municipal Operators. To date, McLennan Sales has grown to service three locations and is by far the largest stocking distributor of waterworks materials in the Maritime provinces.

**SMALL PROJECT**

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ADI Systems completed upgrades on the wastewater treatment facility, in conjunction with Environmental Industrial Services, in Albany, Prince Edward Island. The existing ADI SBR was converted into a modernized ADI membrane bioreactor. These upgrades have allowed the customer to continue to grow their business, by increasing their wastewater treatment capacity and effluent quality. 





## THE PANEL SHOP

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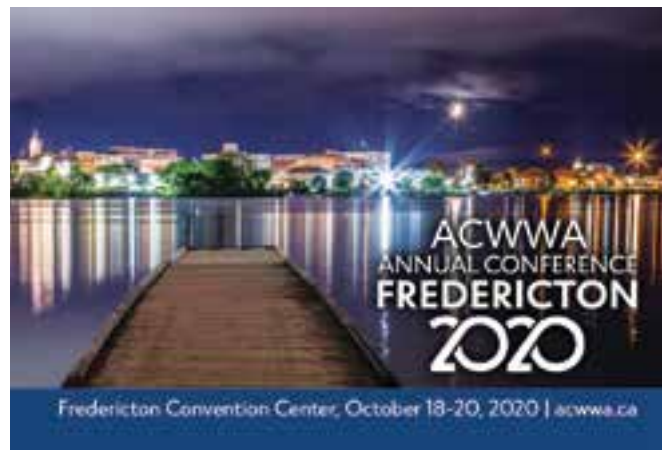
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# CALL FOR ABSTRACTS

## ANNUAL CONFERENCE

Fredericton, Atlantic Canada's Riverfront Capital, is intimate in scale, yet bustling with character and vibrant cultural experiences. Its tree-lined streets and historic buildings are complemented by a high-tech infrastructure that leads the country. The 2020 ACWWA Annual Conference will be held at the Fredericton Convention Center in historic downtown Fredericton with access to a lively trail system, waterfront views, first class restaurants, and other authentic experiences.

Breathe in the fresh air of this amazing city and join the ACWWA in Fredericton in 2020 to learn and share your knowledge with friends and colleagues in the water and wastewater industry. Whether it be regulatory change, disruptive technology, big data, climate change, leadership,



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or asset management planning, come discuss current and future challenges facing our industry. The conference will feature technical sessions, the ABEA Tradeshow, and industry networking opportunities.

### ORAL PRESENTATIONS

The ACWWA is inviting abstract submissions for the 2020 Conference in Fredericton, NS. All topics related to the water and wastewater profession will be considered. Presentations will be 20 or 30 minutes in length with five 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 21, 2020. 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 2021) in

San Diego, California representing the Young Professionals of ACWWA. Along with complimentary conference registration provided by the ACE 2021 organizing committee, ACWWA will provide the winner with a stipend to assist with travel costs to the conference.

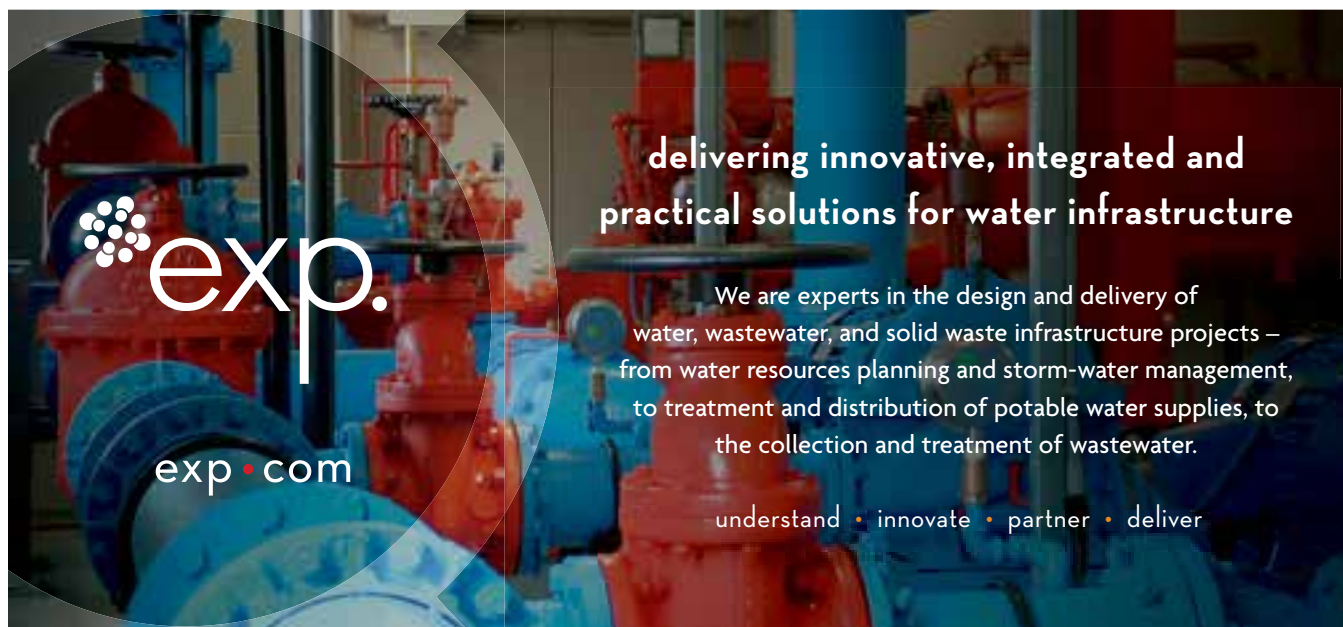
### SELECTION CRITERIA

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 May 2020.

### CALLING ALL STUDENTS!

In addition to being considered for the Fresh Ideas program and a chance of representing the Young Professionals of ACWWA at ACE 2021, we are offering an added incentive for students. Students whose abstracts are accepted will have their conference registration waived! ☺

*Thank you for your submission and we look forward to seeing you in Fredericton!*



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# Geotextile sludge management system provides long-term savings for North Rustico WWTF

By Kevin Bossy, Bishop Water Technologies and Paul Saulnier, Scotia Tech Fluid Services

**S**ludge management can account for as much as half of a wastewater plant's annual operating budget according to studies conducted by the International Water Association and numerous other government and professional groups. Among those feeling this financial strain in Atlantic Canada was the small community of North Rustico, Prince Edward Island. Prior to 2014, the wastewater plant was disposing of as many as three truckloads of waste sludge per week, which was mostly water, and costing nearly \$50,000 annually.

So when the town of about 600 residents began planning to replace its aging wastewater plant, one of the top priorities was to implement a simple, economically and environmentally sustainable process for sludge management. The result was the island's first-ever system to incorporate geotextile bags and specially selected polymers to dewater municipal waste sludge and produce composted, stabilized biosolids that are suitable for land application.

This simple, low-energy approach eliminated the expense of daily sludge hauling and enabled the North Rustico Wastewater Treatment Facility (WWTF) to become self-sufficient for sludge management. Dewatered solids are now composted onsite and either distributed on the property surrounding the plant or taken by farmers to be used as a soil amendment.

The success of this project was recognized in 2014 with the Excellence in Water Stewardship



From left: Preston Silliker, Head Operator; Lenny Blacquiere, Assistant Operator; and Les Standen, Chairman, North Rustico Water and Sewer Committee in front of the sludge dewatering cells at the North Rustico WWTF.

Award from the Council of Federation, which is comprised of Canada's provincial and territorial Premiers.

## **Stakeholders weigh in to select the best sludge management option**

"This was a truly collaborative effort," says Les Standen, Chairman of the North Rustico Water and Sewer Committee and Deputy Mayor. "We brought everyone together to design our new plant and ensure it met our operational, environmental, and financial goals. Our operators played a key advisory role in addition to consulting engineers, equipment vendors, and our Water and Sewer Committee."

Several factors were considered as the town evaluated sludge

management options. Some of the most important included: operational cost savings for the community; a simple process that does not add significantly to operator responsibilities; easily expandable to accommodate community growth; and operational flexibility. Although North Rustico only has about 600 permanent residents, this number can swell to as much as 10,000 during the tourist season, especially when visitors flood in for its popular Canada Day celebration. Each process in the new treatment plant would have to be adaptable to the variable flow and wastewater characteristics that would be experienced throughout the year.

## The island's first geotextile dewatering system for municipal sludge handling

In 2014, North Rustico commissioned a new sequential batch reactor (SBR) wastewater treatment plant designed to handle peak flows of 2,600 m<sup>3</sup>/day (0.69 MGD). The plant was also equipped with a new sludge management system, supplied by Ontario-based Bishop Water Technologies. The award-winning Bishop Solids Management Solution incorporates Geotube<sup>®</sup> geotextile dewatering containers, a unique non-mechanical polymer mixing and activation system and a computerized control system that is integrated to the plant SCADA.

The process is simple. Waste sludge from the plant is first pumped to a storage tank, which usually takes about six to 12 weeks to fill, depending on the time of year. Once full, the storage tank is aerated for several days to create a homogeneous sludge mixture.

Assistant Operator Lenny Blacquiere was part of the original operations team for the new plant and was one of the first to begin using the Bishop Solids Management Solution. He says that once aeration is complete, he performs a simple jar test to measure the solids concentration of the sludge and calculate the polymer dose. "After the jar test is done, I just set the dose parameters on the control panel, open a few valves, start the pumps and the rest is pretty much automatic," Blacquiere says.

The dewatering system is equipped with a unique Venturi Emulsion Polymer Activation System (VEPAS), which mixes and activates polymer in a single step before injecting it directly into the sludge flow line. Its venturi-based design also eliminates many of the components typically found in mechanical polymer systems that take so much time to clean, such as mixers and aging tanks.

"Once we finish pumping out the sludge storage tank, it only takes about an hour to completely disassemble, clean and reassemble the VEPAS," Blacquiere says. By comparison, conventional polymer

systems can take several hours or more to clean.

Polymer is essential to accelerate and enhance the dewatering process and to prevent blockage of the microscopic pores in the woven polyethylene fibres of the geotextile bag. The VEPAS at North Rustico also incorporates PLC controls and sensors that measure the flow rate of the sludge and automatically adjust the polymer dose to maintain optimal dewatering performance.

The sludge is pumped at a rate of about 250 L/min into one of four Geotube<sup>®</sup> containers that are positioned on a large concrete lay-down area. Each container measures 57 feet (17.4 m) in length and 45 feet (13.7 m) in circumference. As the bag is filled and dewatering occurs, clear filtrate passes through the pores of the Geotube<sup>®</sup> containers, is collected inside the lay down area and directed back to the plant headworks for additional treatment.

### Dewatering containers provide years of trouble-free service

Head Operator Preston Silliker says the plant began operating with two dewatering bags, but an additional cell and two more containers were added in 2018. "With four dewatering containers we can alternate their use to maximize the capacity of each bag and also provide plenty of time for the sludge to dewater and compost," Silliker says. "We can leave the bags on the pads for several seasons. As they dewater, the volume decreases and more space becomes available for us to top them up again and again. Winter freeze also helps since they tend to lose a lot of water in the spring when they thaw."

As an example, in the prior season some Geotube<sup>®</sup> containers were pumped to about 30 inches (76 cm) in height just before winter. In the spring, their height decreased by half, to about 15 inches (38 cm), which enables them to continue accepting sludge throughout the following season.

One additional Geotube<sup>®</sup> container can be set up in a greenhouse during the winter months, enabling sludge to be pumped and dewatered year round.



The Bishop Solids Management Solution has enabled North Rustico WWTF to become self-sufficient for sludge handling and save tens of thousands of dollars annually in operating costs.


### Long-lasting benefits

"Each dewatering container lasts for about three years before it's full," says Silliker. "When we open it up, the material inside is dry and light like peat and has no odour. We worked with the Department of Environment, Water and Climate Change to test that there are no harmful residuals in the biosolids and that it can be safely spread on farmland and our property."

"This system has provided many benefits to plant operation and our community," Standen says. Not only do we have onsite sludge treatment, but also significant savings in labour and hauling fees. We've had this new plant for five years now and haven't had to raise rates, in part because this new sludge management system is helping save money for the community and keep rates low."

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# The **New** IDE Committee

In the past year, the Atlantic Canada Water and Wastewater Association (ACWWA) established an Inclusion, Diversity, and Equity (IDE) Committee to assist in creating an organizational environment that recognizes, encourages, celebrates, and effectively utilizes each individual member's talents.

Over the past eight months, the IDE Committee has been working with researchers at Acadia University to better understand how ACWWA can improve and retain representation within the water industry. Through this collaboration, a quantitative survey for member volunteers to

evaluate IDE in the association was created as well as a qualitative survey for water industry professionals with the goal of obtaining information that will reinforce themes found in the member-wide survey. This initiative is ongoing and is anticipated to provide meaningful and statistically significant results with the goal to be presented at the ACWWA annual conference in Fredericton in 2020.

The ACWWA continues to use AWWA resources in moving forward on diversity and inclusion. For organizations that are interested in establishing their own IDE committee, there are a number of resources



available through AWWA that can help jumpstart this process. For example, AWWA has a Diversity and Member Inclusion How-to-Guide that can aid organizations on how to start implementing diversity and inclusion activities and programs (<https://cdn.ymaws.com/www.isawwa.org/resource/collection/5B1BFC46-B834-49EF-A533-CA11E7760A0D/diversity-how-to-guide-b.pdf>).

The ACWWA would also like to highlight the new InFLOW program through the Water Environment Federation (WEF). It is an initiative that strives to identify under-served minority students who are interested in pursuing careers in the water industry. Through this scholarship program students have travelled to WEFTEC and have fostered relationships with water professionals. For those looking for more information on the InFLOW program, please visit [www.wef.org/inflow](http://www.wef.org/inflow).



The ACWWA IDE Committee encourages anyone who is interested in learning more about the initiatives, making suggestions, or joining to please contact the committee chair, Dallys Serracin for more information ([dallys.serracin@dal.ca](mailto:dallys.serracin@dal.ca)). 

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# Update

from the YP and Water For People Committees

**T**he 2019 ACWWA Annual Conference in Halifax was a success for both YPs and the Water For People Committee. This year, the YP seminar kicked off with a presentation on small business start-ups and entrepreneurship by Grant Wells (Associate Director for the Norman Newman Centre for Entrepreneurship at Dalhousie University), followed by a presentation on AquaHacking by Emma Wattie (Director, Atlantic Water Network). AquaHacking is a clean-tech competition open to young professionals (18–35) to find technical solutions to some of Canada’s major water issues, and the Atlantic AquaHacking challenge will be hosted in Halifax in 2020. This year, part of the YP seminar also involved a break-out session where YPs discussed the major water issues in our region. The event was followed by the YP mixer at the Middle Deck restaurant in downtown Halifax. Due to the great response to the event, you can expect to see another YP seminar and mixer at the 2020 Annual Conference in Fredericton, New Brunswick.


In addition to the YP seminar, the YPs were busy volunteering, networking, and giving presentations. Overall, seven YPs gave oral presentations, three of which were considered for the Fresh Ideas competition. It is a pleasure to announce that Ballie Holmes, a MASC Student from Dalhousie University won the Fresh Ideas competition with her talk on “Understanding Factors Influencing Harmful Algae Blooms in a Headwater Lake in Cumberland County, NS.” Ballie will be representing the YPs of ACWWA

in the Fresh Ideas poster competition at the 2020 AWWA Annual Conference and Exposition in Florida (June 14–17)!

A number of YPs also helped with Water For People events, including the silent auction and the 50/50 draw. More than \$22,000 was raised at this year’s conference. A special thanks goes out to the City of Moncton employees who donated \$10,000, the ABEA who donated \$6,000, and the town of New Glasgow who donated more than \$2,000, as well as everyone else who donated through the silent auction, 50/50 tickets, the table

auction, and the fun run. Overall, it was a big success!

The YP Committee and Water For People Committee have more events planned for this winter. Keep an eye out for upcoming event details that can be found on the ACWWA social media pages and website.

For anyone looking to learn more about the YP and Water For People committees, or to help out at events, contact the YP Chair, Lindsay Anderson ([lindsay.anderson@dal.ca](mailto:lindsay.anderson@dal.ca)), or the Water For People Chair, Sean MacIsaac ([seanmacisaac@dal.ca](mailto:seanmacisaac@dal.ca)). 



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# Maintaining an open-channel wastewater UV disinfection system

By Wayne Lem, Business Development Manager, Trojan Technologies

Ultraviolet radiation (UV) has become increasingly popular for disinfecting primary and secondary effluent from municipal wastewater treatment plants. The most common UV system for this type of application is an open-channel (open to the atmosphere) UV system where effluent typically flows by gravity past the UV lamps installed in a bank arrangement submerged in a concrete or steel channel. UV provides chemical-free, safe, reliable, and cost-effective disinfection without the generation of hazardous disinfection by-products. However, proper operation and maintenance (O&M) is needed to ensure the best performance and long equipment life.

## How does a wastewater UV disinfection system work?

UV provides rapid, effective inactivation of pathogens (i.e., bacteria, viruses) through a physical process. When pathogens are exposed to specific wavelengths of UV light, genetic material (i.e., DNA) is damaged to the extent that they are rendered incapable of reproducing and causing infection.

## What are the major mechanical and electrical components in a wastewater UV disinfection system?

Core components of a traditional UV system often include UV lamps and drivers (or ballasts), quartz sleeves, and the sleeve cleaning system (either manual or automated). System power and communication is centralized in a Power Distribution Center (PDC). As UV lamp and driver technologies have advanced in terms of electrical efficiency, PDCs have become much

more compact. When it comes to water level and flow management in an open-channel UV system, key components include either fixed weirs, Automatic Level Controllers (ALCs), or Modulating Weir Gates (MWGs). One of these options would be installed in the UV channel to maintain the appropriate water level to keep the UV lamps submerged so that no portion of the lamp bank arrangement is exposed to air. The System Control Center (SCC) monitors and controls all UV functions to ensure optimal disinfection performance.

## What needs to be monitored to ensure the wastewater UV system provides adequate disinfection?

Critical parameters to disinfection performance include flow rate, UV transmittance (UVT), lamp on/off status, and lamp UV output monitored through the use of UV intensity sensors. The SCC interprets these parameters to calculate of real-time UV dose and enable automatic adjustment of lamp power to deliver the required dose.

## What process checks should operators make on a wastewater UV system, and how frequently?

It is recommended that UV operators take a daily walk around the equipment and do a visual inspection. In many cases, the SCC will be connected to a plant SCADA system, so system status and any alarms will be available remotely. A local visual inspection of the equipment is also recommended – this typically takes five to 15 minutes depending on the size of the UV system. Furthermore, it is imperative that the system is maintained as per the manufacturer’s guidelines and O&M manual instructions.



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**STRAIGHT from the SOURCE**

### What electrical inspections should be done on a regular basis?

Operators should visually inspect electrical enclosures, conduits, and wiring on a routine basis. When maintained and kept dry, the UV system life span is extended. Recommended inspection and service intervals should be listed in the O&M manual provided by the UV system manufacturer.


### What mechanical checks should be made on the system regularly?

Visual cues go a long way in identifying mechanical concerns. Operators should routinely inspect for system alarms and take the necessary measures to rectify non-conforming conditions. For UV equipment with sleeve cleaning systems, it is important to visually inspect sleeves to ensure they are being effectively cleaned and there is no water leakage inside the quartz sleeve. The before-mentioned O&M manual will also outline consumable parts such as wiper seals and o-rings. These parts should be checked for wear and tear on a periodic basis and replaced as needed.

### What are some of the common troubleshooting inquiries associated with wastewater UV systems?

Issues are often related to improper maintenance, changing of site conditions (e.g., UVT, TSS), or the use of third-party replacement parts. It is recommended that replacement parts be the same as those tested with the equipment and supplied by the equipment manufacturer. Doing so ensures disinfection performance is consistently met and UV equipment is not compromised. Similar to other types of capital equipment in a plant, preventative maintenance and proper service will ensure your UV system stays reliable and continues to perform well – thus, protecting your investment for the long term. ☁

The "Back to Fundamentals" department is published in each edition of *Go With the Flow* magazine. It is intended to cover a broad range of fundamental water and wastewater topics that will be driven by you, the readers of this magazine. If you find a topic particularly interesting or confusing, most likely others do as well. Please forward your ideas for future columns to Kyle MacIntyre, Dillon Consulting ([kmacintyre@dillon.ca](mailto:kmacintyre@dillon.ca)) or John Lam ([john.lam@novascotia.ca](mailto:john.lam@novascotia.ca)) and we will respond in future publications to your queries.



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**SOLENO**  
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## CASE STUDY

# Complete HDPE storm water sewer for Candiac Square

## STORM WATER MANAGEMENT: A COMPLETE SOLUTION IN HDPE OFFERED BY SOLENO.

The construction project of the Candiac Square, the second most important residential project of Greater Montreal in 2016, included the development of two underground retention systems and a complete network of HDPE storm water sewer and treatment system responding to the municipal and provincial governments requirements for storm water management. Supported by our specialized consulting services, this large-scale project was carried out in several phases. The benefits of this economical, simple and fast installation system won over the various stakeholders of the project, to install the first storm water sewer network completely in HDPE.

The Candiac Square, a multi-generational POD type project (pedestrian-oriented development) of more than 600 million dollars of infrastructure investment, was planned for more than 2000 diverse housing units. For the first part of the storm sewer network, the contractor proceeded with the installation of over 630 linear meters of Solflo Max pipes of 1200 mm (48 in) in diameter, as well as around 15 manholes chimney type of 900 mm (36 in) in diameter, welded directly to the Solflo Max pipes. Finally, more than 1290 linear meters of 1200 mm (48 in) diameter Solflo Max pipes will form this HDPE storm sewer network. For each of the two 16 rows retention systems, nearly 480 HydroStor HS180 chambers were installed. The first retention basin will store 2,505 m<sup>3</sup> (88,463 ft<sup>3</sup>) and the second retention basin will store 2,475 m<sup>3</sup> (87,403.8 ft<sup>3</sup>) of water for heavy rain events.

Corrosion, abrasion, de-icing salts and vibration resistant, the use of high-density polyethylene (HDPE) ensures the sustainability of the infrastructure. The development of a storm sewer system completely made of HDPE, an efficient and durable material, can therefore ensure the longevity of the new Candiac Square network.

Lightweight and easy to handle, HDPE products don't require the use of specialized equipment, such as a crane, thus making the installation easier and the execution of the work quicker, key factors that were much appreciated by the contractor, A & J.L. Bourgeois Ltd. The length of the Solflo Max pipes reduces the installation time as well as the number of joints required, compared to traditional concrete pipes. In addition, unlike the traditional concrete manhole, the HDPE manhole does not require oversizing, which allows to reduce the manhole diameter and brings substantial savings both in terms of purchase price and excavation-installation costs. Its welded HDPE design allows the assembly of the inlets and outlets at the factory, which facilitates piping connection on the job site. In addition, thanks to the watertight bells with o-ring gasket (BG) or with integrated gasket (BGI) - patented and exclusive to Soleno - slightly oversized, Solflo Max pipes quickly and easily fit together, bringing significant benefits on the job site. Fitted with clips to validate the quality of the installation as well as the depth of the nesting, the use of watertight bells provides powerful joints and ensure the watertightness of the storm sewer network.

The HydroStor HS180 retention system, made of polypropylene and high-density polyethylene, is easy to install, thanks to the lightweight retention chambers. Its capacity to absorb heavy rain prevents sudden flooding. The HydroStor HS180 retention chambers, designed for heavy volume or restricted available space projects, can store 5.1 m<sup>3</sup> (180.1 ft<sup>3</sup>) of storm water per chamber, making them more cost-efficient by greatly reducing the area of the site. The installation of a HydroStor geogrid helps to ensure a solid and stable foundation at the base of the chambers, by distributing linear workloads over a larger surface area.

Sustainable storm water management is a growing concern for municipalities. Development projects must incorporate solutions to solve problems related to the collecting, conveying, treating and storage of storm water.

Our engineers are available to help you identify and implement the best management practices to protect water resources that might be impacted by water runoff in urban or rural areas.

Write to us at [servicetechnique@soleno.com](mailto:servicetechnique@soleno.com) or visit [soleno.com](http://soleno.com) to find out about our sustainable solutions for storm water management.



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