

SUMMER 2015

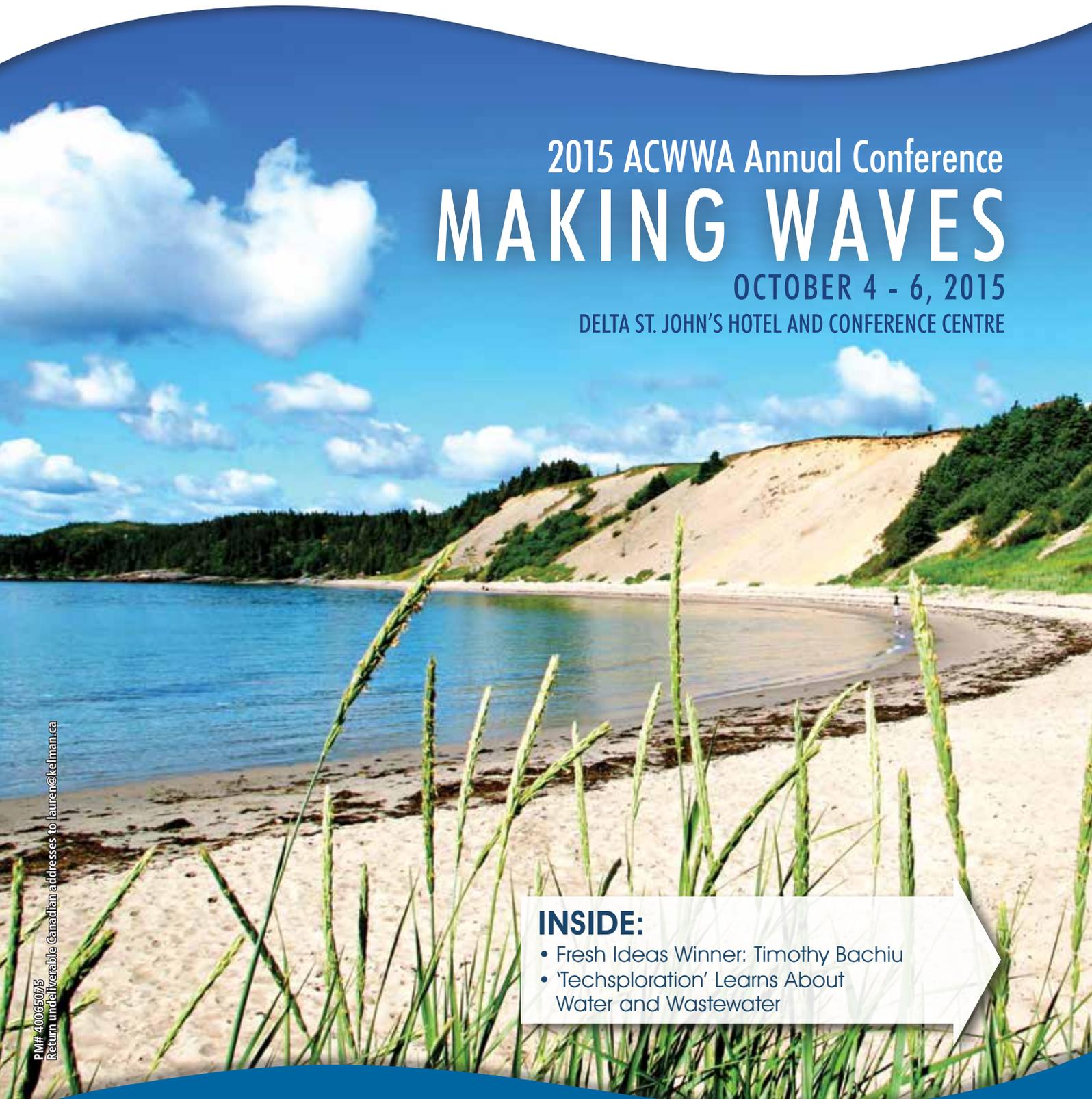
# GO with THE FLOW

THE OFFICIAL PUBLICATION OF THE ATLANTIC CANADA WATER AND WASTEWATER ASSOCIATION

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- Fresh Ideas Winner: Timothy Bachiu
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### **TÜV certificate emphasizes outstanding performance data of ZS Screw blowers.**

The introduction of air blowers using internal compression instead of external compression sets a new standard for energy efficiency in the low-pressure market. This is the main conclusion of a technical whitepaper published by Atlas Copco's Oil-free Air Division, explaining the differences between screw technology and the traditional 'Roots' type lobe technology. On average 30 percent more energy efficient, screw technology improve energy efficiency for low-pressure applications and industries such as wastewater treatment and pneumatic conveying.

*"Over the past 50 years the blower market for small volume flows has not seen any major technical improvements", says Chris Lybaert, President of Atlas Copco's Oil-free Air Division. "The only considerable development we have seen with the 'Roots' type lobe blowers, was the reduction of pulsation levels. There were still significant steps to be made in the area of energy efficiency. Atlas Copco achieved this by developing the twin screw design for a low pressure blower. By doing so we introduced a technological advantage in this market Segment."*

The range of ZS screw blowers uses the concept of internal compression, while the traditional "Roots" type lobe blowers rely on external compression to obtain an external system pressure. This detailed technical whitepaper demonstrates that, with a thermodynamic approach, internal compression is more efficient than external compression from 0.4 bar (e) / 5.8 psi (g) upwards. Tests, witnessed and certified by the independent Technische Überwachungs-Verein (German Technical Monitoring Association, or TÜV) have proven that the ZS is 23,8 percent more energy-efficient than a tri-lobe blower at 0,5 bar(e) / 7 psig, and 39,7 percent at 0.9 bar(e) / 13 psig. The technical whitepaper, TÜV certificate and additional information, images and movies can be found on: [www.encyclopedia.com](http://www.encyclopedia.com).

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## The two seasons in Atlantic Canada

Welcome to the summer edition of *Go With the Flow*, ACWWA's magazine for members. Many will be familiar with the saying that in our region, there are two seasons: winter, and construction season. While that may be a bit of an exaggeration, summer is the time that many utilities undertake the bulk of their preventive maintenance programs, and infrastructure renewal projects. I expect all of you have an ambitious work schedule planned for the summer season.

Renewal is also important as it relates to ACWWA. At the Board level, we are continually seeking to improve our governance and our member benefits in order to be as effective as possible as a trusted resource for our members' needs.

While the Board is responsible for establishing the strategic direction of the association, it is our Executive Director, Clara Shea, and the volunteers at the committee level who do the hard work to ensure ACWWA provides great value to its members. We appreciate our volunteers, and I would encourage anyone with an interest in becoming more active in ACWWA to contact Clara at [contact@acwwa.ca](mailto:contact@acwwa.ca). She can put you in touch with the right people who will match you up with a volunteer role that best suits your interests. You will never regret getting involved!

I hope everyone has a productive and successful summer, and is able to take some time to relax, and enjoy the nice weather. Even though we hope this summer is a great one, it is not too early to

look ahead to the fall. ACWWA's fall education program is already in the planning stages, and there are many conference opportunities that you may want to consider:

- **WEFTEC 2015** – The 88th annual Technical Exhibition and Conference of the Water Environment Federation is slated for September 26–30 in Chicago Illinois;
- **ACWWA Annual Conference** – St. John's, Newfoundland and Labrador is this year's host of our association's premier educational and networking event. Join us in St. John's from October 4–7 for what promises to be another excellent conference;
- CWWA hosts its inaugural **National Water & Wastewater Conference** in Whistler, British Columbia from October 25–28.

I will close by thanking Jason Phillips and his conference organizing committee for all of the work they are doing in planning this year's ACWWA Conference. It takes a lot of effort to organize the conference, and a great number of volunteers to produce the quality event ACWWA members have come to expect and appreciate. I hope everyone makes plans to attend, and I will look forward to seeing you in St. John's in October. Be sure to check out the conference information in this magazine, and use the ACWWA website to take advantage of the online hotel booking and conference registration.

I hope you enjoy this edition of *Go With the Flow*. If you have any comments, questions, or concerns about any ACWWA matter, please contact me at [scott.grasman@fredericton.ca](mailto:scott.grasman@fredericton.ca). Enjoy the summer, and work safely. ☺



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## Keeping you connected

Welcome to the Summer 2015 edition of ACWWA's *Go With the Flow*. This excellent publication continues to help connect you with the Atlantic Canada water and wastewater industry and your peers. Enjoy the read.

My director role took me to Santa Fe, New Mexico in late January 2015 for the AWWA Winter Board meeting. This meeting was an excellent opportunity to stay tuned with the direction of AWWA and what our sister sections are getting done in their areas. The Board meeting provided the approval of new Standards, Policy Statements and annual award winners. Importantly, the members elected Jeanne Bennett-Bailey from the Virginia Section to serve as the



Association's President-Elect for a one-year term beginning in June 2015. One area where

AWWA is making a strong strategic push is in the expansion and growth of philanthropic programs. Enhanced fundraising initiatives will support scholarship and outreach program growth. Check out and support **The Water Equation Campaign** at [awwa.org](http://awwa.org).

By the time of this issue's publication, the **AWWA Annual Conference & Exposition** will have taken place in Anaheim, California (June 7-10). The passing of this marquee event reminds us that the ACWWA showcase conference is right around the corner.

Please join us for the **Annual ACWWA Conference** in St. John's, NL, Canada's oldest city, cradled in a harbor carved from 500-million-year-old rock. The conference, with the theme of 'Making Waves' will



"These 100-plus presentations cover all aspects of our industry and are a tremendous resource for you and your teams. Please take a look and give us some feedback along the way."

feature technical sessions, the ABEA tradeshow, the ever-popular 'Top Ops' competition, and many networking opportunities. Reunite with friends and colleagues as we share in Newfoundland's hospitality and discuss the many issues and changes that we face, and make waves for the future. Please join us in St. John's, NL and share your experiences.

In this edition, I have one nugget of awesome 'member benefit' to highlight. All of the **CONFERENCE**

**PRESENTATIONS** from the ACWWA conferences in 2012, 2013, and 2014 are available on the ACWWA website for your viewing. These 100-plus presentations cover all aspects of our industry and are a tremendous resource for you and your teams. Please take a look and give us some feedback along the way.

I remain committed to representing our needs at the AWWA level. Please send me your comments or questions at [Jamie.hannam@halifaxwater.ca](mailto:Jamie.hannam@halifaxwater.ca).

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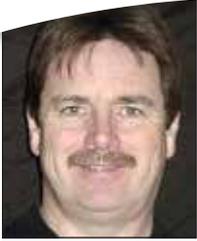
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## Public information tools available online

Well, looks like spring is finally here, a slow opening for the golf courses but most of the snow is gone. With spring comes WEFMAX, which is our regional section meeting session for WEF. These meetings are taking place on May 27, 28 and 29 in Quebec City. I will be attending and always gain valuable

information on ways to improve our member association. The Young Professionals summit is also a part of WEFMAX and our Atlantic Canada MA will be represented.

Also, I will be promoting our October conference in Newfoundland to our other Canadian sections; it is always a great time in St. John's.

Last month I started a series on

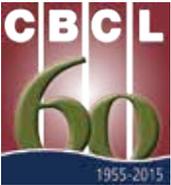
informing you, the WEF members, of useful tools provided by WEF on their website. This edition I am going to tell you about the brochures and bill stuffers available to all members through ACWWA.

To access what is available you will need to go to [www.wef.org](http://www.wef.org) and then head to the *Public Information* tab. As you scroll down, you will see the section on the items below. Included categories are:

- The WaterRecycle: Three Magic Rs! (Bill stuffer only)
- Stormwater Runoff: Take It Personally! (Bill stuffer only)
- Drug-Free Drains: You Can Help Protect Our Waters from Pharmaceuticals and Personal Care Products! (Bill stuffer/Brochure)
- Fat-Free Sewers: How to Prevent Fats, Oils, and Greases from Damaging Your Home and the Environment (Bilingual version available.) (Bill stuffer/Brochure/Mini-stuffer)
- Sustainability Starts at Your Sink: How to Dispose of Household Waste (Bill stuffer/Brochure)
- Ever Wonder Where It Goes? (Bill stuffer/Brochure)
- It's a Toilet, Not a Trashcan! (Bill stuffer only)
- Too Cute to Pollute? (Bill stuffer only)

These are great to use as public information tools at conferences, your treatment plant facilities, and by mail. Have a look at what might be useful to you and drop me a line to ask about getting some from WEF and ACWWA. As a closing note I will once again encourage membership in WEF; email me at [gary.chew@sansom.ca](mailto:gary.chew@sansom.ca) to discuss the best type of membership for your utility or business. Hope to hear from you soon. ☺

"To access what is available you will need to go to [www.wef.org](http://www.wef.org) and then head to the *Public Information* tab."



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## 'CWWA Public Attitudes 2015'

By the time you receive this summer issue of *Go With the Flow*, CWWA will have just released a new report titled, 'CWWA Public Attitudes 2015.' This report looks at the issue of how we start to change public attitudes when it comes to water and wastewater infrastructure challenges.

I believe the information presented in the *CWWA Public Attitudes 2015* report will be of interest to all the water and wastewater professionals in Atlantic Canada and beyond, so I wanted to specifically bring this report's release to the attention of our ACWWA members and provide some background.

A few very interesting reports have been released recently with regard to water and wastewater infrastructure in Canada. Back in 2013, the Federation of Canadian Municipalities (FCM), in conjunction with several partners (including CWWA), conducted the *Infrastructure Report Card*. The results of that report demonstrated the billions of dollars that are required now and in the near future for infrastructure replacement. The report looked at roads and bridges as well as water, wastewater, and stormwater. A second round of that Report Card was conducted as recently as January 2015 and the results are being compiled and analyzed now for an expected release this fall. We already know that a lot more municipalities were able to respond this year, but we expect similar results, suggesting the critical need for major investment in our infrastructure.

BCWWA recently released a report on the state of water and wastewater infrastructure in British Columbia asking "Are Our Water Systems at Risk?" and considering the sustainability of their systems. Again, this report identifies the need for major investments in water and wastewater infrastructure.

At the same time the Royal Bank (RBC), through their Blue Water Project, has been conducting annual surveys of the general public to gauge their attitudes on water. The eighth edition of the RBC *Attitudes Survey* was released in March of this year with an emphasis on attitudes around infrastructure. The results are very telling and set a clear mission for all of us in the water/wastewater industry.

"CWWA hopes that this report will help to bridge the gap between the reality of our infrastructure challenges and the public opinions."

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“Mark your calendars for the first CWWA Annual National Event set for October 25–28, 2015 in beautiful Whistler, British Columbia.”

While public confidence in water is still very high (approaching 80%), less than half of respondents know where their water comes from, how water and wastewater is treated, nor the condition of their municipal systems.

CWWA's work at the federal level, providing comments to the Infrastructure Roundtable, contributed to the renewed Building Canada Fund. We continue to call for greater federal funding, but meanwhile:

1. We need to get the provincial and municipal decision-makers to choose water/wastewater projects for use of the available infrastructure funds.
2. The decision-makers need to know they have the support of the public when they make the critical decisions that they need to make.

So right in between the RBC Attitudes Survey and the next Infrastructure Report Card, CWWA is releasing the CWWA *Public Attitudes 2015* report this May. CWWA hopes that this report will help to bridge the gap between the reality of our infrastructure challenges and the public opinions. The goal of an eventual communications plan would be to get municipal citizens to support, or at least accept, decisions by their local council or board to make major investments into water and wastewater systems. The report looks at messaging around the value of water, educating the public on how water/wastewater systems work, and what might happen if we do not act soon – all with a positive message!

This CWWA Attitudes report is not intended to be a final communications plan, but rather a guidebook for those water and wastewater professionals developing such a plan. CWWA's objective and hope with this report is that the water and wastewater professionals will review its findings and that the information will help clarify the need for a campaign and clarify the issues involved in the water and wastewater sector.

I encourage all water and wastewater professionals in Atlantic

Canada to view the report and hope it will be useful in the development of your water and wastewater challenges.

**Mark your calendars for the first CWWA Annual National Event set for October 25–28, 2015 in beautiful Whistler, British Columbia.**

Details on the program and venue can be found at [www.cwwa.ca](http://www.cwwa.ca).

Should any other information be required on CWWA activities or initiatives, please do not hesitate to contact me directly at [roland.richard@nb.sympatico.ca](mailto:roland.richard@nb.sympatico.ca) or visit the CWWA website at [www.cwwa.ca](http://www.cwwa.ca). 



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# SPOTLIGHT ON THE Halifax Water Industrial Research Chair Program at Dalhousie University

## PEOPLE ON PROJECT

Graham Gagnon, Wendy Krkosek (maternity Leave – Dec. 2015), Heather Daurie (maternity leave – June 2015), Jessica Campbell, Tarra Chartrand, Heather Granger, Eliman Camara, Sarah Jane Payne, Brad McIlwain, Amina Stoddart, Safiur Rahman, Megan Wood, Jillian Woods

## PARTNERS

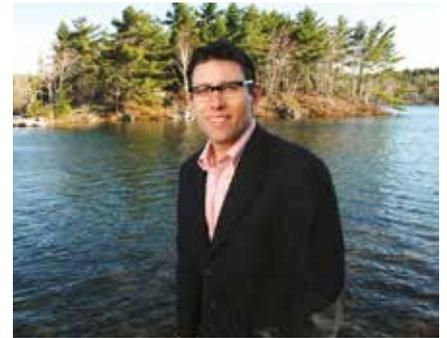
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## OBJECTIVE AND BACKGROUND

The Chair's objective is to apply the research resources of Dalhousie University in a manner that will address real problems in water

resources that exist or are anticipated in Nova Scotia, the Atlantic region, and beyond.

Faced with ongoing challenges to develop water treatment technologies that are friendly to the environment but still meet increasingly strict water quality regulations, Dr. Graham Gagnon and his team continue their work with the water industry. Dr. Gagnon holds the NSERC/Halifax Water Industrial Research Chair in Water Quality and Treatment. The Research Chair, awarded in 2007, is sponsored by the Natural Sciences and Engineering Research Council (NSERC) of Canada. Since its inception, the Chair program has provided numerous research opportunities for highly qualified



Dr. Graham Gagnon

personnel at the undergraduate, MASc, and PhD levels.

Dr. Gagnon's team has held research partnerships with First Nations communities, federal and provincial agencies, private industry, and municipal agencies like Halifax Water. This innovative partnership between Halifax Water and Dalhousie University has been recognized by the American Water Works Association (AWWA).

In 2012, three new partners joined the program: LuminUltra Technologies, Ltd., CBCL Ltd., and the Cape Breton Regional Municipality. The Chair program provides an integrated research approach that ensures the protection of public health from opportunistic pathogens and chemical by-products, while ensuring the longevity of drinking water infrastructure.

## FACILITIES

In 2008, Halifax Water constructed a two-train pilot plant simulating a full-scale drinking water treatment facility. The Clean Water Technology Laboratory at Dalhousie was constructed in 2010.

## FOR MORE INFORMATION

You can follow Dr. Gagnon on Twitter at @DalWaterProf.

For more information on the team's projects and research, email [water@dal.ca](mailto:water@dal.ca), or go to [centreforwaterresourcesstudies.dal.ca](http://centreforwaterresourcesstudies.dal.ca).

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# Winner of the **Silent Hero Award**, Lewis Stewart



1. **Job title:** Works Supervisor (wastewater collection).
2. **Who do you work for?** Halifax Regional Water Commission (retired very recently).
3. **Where do you currently live?** Halifax, Nova Scotia.
4. **Where did you grow up?** Halifax, Nova Scotia.
5. **When I'm not working, I'm...** Ballroom dancing, golfing, hiking, wood working, or studying music.
6. **The accomplishment I'm most proud of is...** Seeing both of my sons graduate university with degrees.
7. **If you could go on a road trip with any one person (living or dead), who would it be and where would you go?** I would absolutely be with my wife Cheryl and we would travel across Canada.
8. **What is your philosophy on life?** To be continually learning.
9. **Toughest thing about your job?** Constantly dealing with changing priorities and time lines.
10. **When you were a kid, what did you want to be when you grew up?**

Haha... never thought about this in a while. An atomic engineer – guess I didn't make it.

11. **Last book you read?** *The Everything Bridge Book* (I am learning to play bridge).
12. **Last movie you saw?** Gran Torino.
13. **What music did you listen to this morning?** Eric Clapton.
14. **Favourite TV show?** Star Trek: The Next Generation.
15. **What was the best gift you ever received?** My sons.
16. **What is the most useless thing you ever purchased?** Can't say I have ever purchased anything useless. Of course Cheryl may disagree with me.
17. **Not many people know that...** I was a smoker 17 years ago. Maybe this was the "useless purchases."
18. **What attracted you to the water/wastewater industry?** It was mechanical work and my background is in mechanical maintenance.
19. **What is your greatest luxury?** My home.
20. **What is your favorite famous quote?** "Russian parts, American parts, all made in Taiwan!" (from the movie

'Armageddon'). Not sure if it's a famous quote or not but I liked the reference to the growing global economy.

21. **Describe your perfect day.** My perfect day is one in which I have learned something new and was able to share it with someone else.
22. **What three objects would you rescue from your burning house?** Once my wife and I were safely outside, I would say there is nothing else of value. I would not re-enter the house.
23. **What do you like most about your job?** The constant changes; it never gets boring.
24. **Who is the most influential person in your life?** Cheryl, my wife.
25. **What is your ideal vehicle?** A dependable one.
26. **What is your favorite travel destination?** Anywhere that the sun is shining.
27. **How long have you been a member of ACWWA?** Not sure. I have been a member of the MPWWA for many years (15+). 🐼



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## Membership updates

A big welcome to our new members over the past few months:

Name	Company	
Sean Elms	Town of Bay Roberts	AWWA
Matt Balcobe	WSP Canada Inc.	AWWA
Hillary Capstick		AWWA
Larry Dunlop	QM Construction Ltd.	AWWA
Pierre Levesque	Balmoral	AWWA
Floyd Anderson	Town of Channel-Port Aux Basques	AWWA
Denis Leblanc	Denyg Mechanical	AWWA
Mia Vautour	WSP Canada Inc.	AWWA

Here is a snapshot of what our membership looks like:

Membership totals as of May 4, 2015:	
AWWA - 408	WEF - 129

### Did you know?

**NEW MEMBER REFERRAL** – For every new member that you get to become a member of ACWWA (either through AWWA or WEF), **your name will be entered in a draw for a \$50.** All the new member has to do is include you as a reference. If you do not know your member number, please email [amyw@cbcl.ca](mailto:amyw@cbcl.ca) and I can provide it to you. Draws take place every three months. 

## PHOTO CONTEST Your Family and Water



**PRIZE \$400**  
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1. Photo must be submitted by an ACWWA member.
2. Photo must include water AND a family member(s) and/or pet(s).
3. Please provide first name of those in photo.
4. Unlimited submissions.
5. Judged by Membership Committee.
6. Deadline for submission is August 31, 2015.
7. Submit pictures or questions to [amyw@cbcl.ca](mailto:amyw@cbcl.ca).

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This year's Fresh Ideas winner:

# Timothy Bachiu



Timothy Bachiu is a geoscientist with AECOM Canada in the Halifax office. He specializes in hydrogeology, geochemistry, and water resources. His background in geology informs environmental and water resource applications. He provides field, technical, and analytical support to working groups quantifying groundwater and surface water supplies, evaluating environmental impacts, and modeling rock/water interactions.

Mr. Bachiu was a first-time young professional participant of the ACWWA and the *Fresh Ideas* Program in the fall of 2014.

#### Fresh Ideas presentation competition

The Atlantic Canada Water & Wastewater Association holds a presentation competition each year at its Annual Conference. All topics must be related to the water and wastewater profession. Presentations must be 20 minutes in length with five minutes for questions.

The Fresh Ideas program has been developed through AWWA's Manufacturers/Associates Council and the Young Professionals Committee. The top presentation selected from this group of presenters is given the opportunity to compete in the Fresh Ideas poster competition at the AWWA

Annual Conference and Exposition (ACE), representing the Young Professionals of ACWWA.

**2014 winning presentation title:**  
**Watershed studies in Halifax Regional Municipality to support development planning**

*By: Timothy Bachiu, MSc., P.Geo.*

#### Abstract

Surface water and groundwater quality are used to inform development patterns and service requirements in the Halifax Regional Municipality (HRM). Municipal policy requires watershed studies prior to secondary development planning. Two watershed studies provide examples of modeling used to predict development impacts on surface water quality and a groundwater survey used to identify aquifers associated with elevated arsenic in groundwater. The Sandy Lake watershed in Bedford, Nova Scotia includes areas of low and medium density residential development and areas of light industry. Residential development is anticipated to increase over the next 20 years. A phosphorus loading model is used predict the carrying capacity of Sandy Lake and how future development scenarios will



2014 Fresh Ideas winner Timothy Bachiu with Sandra Ralston of WEF and Jim Chaffee of AWWA

impact phosphorus concentrations and lake trophic status. The Preston Area includes rural communities with limited projected growth. Portions of the Preston Area utilize drilled bedrock wells for water supply and are unlikely to be serviced with municipal water. Elevated concentrations of arsenic are documented in the metamorphosed sedimentary rocks of southern Nova Scotia, including the Preston Area. Results of a groundwater quality survey in Preston Area are used to identify specific lithologies associated with elevated concentrations of arsenic in groundwater. The results of the phosphorus modeling and groundwater survey are used to inform development planning and water service needs. 



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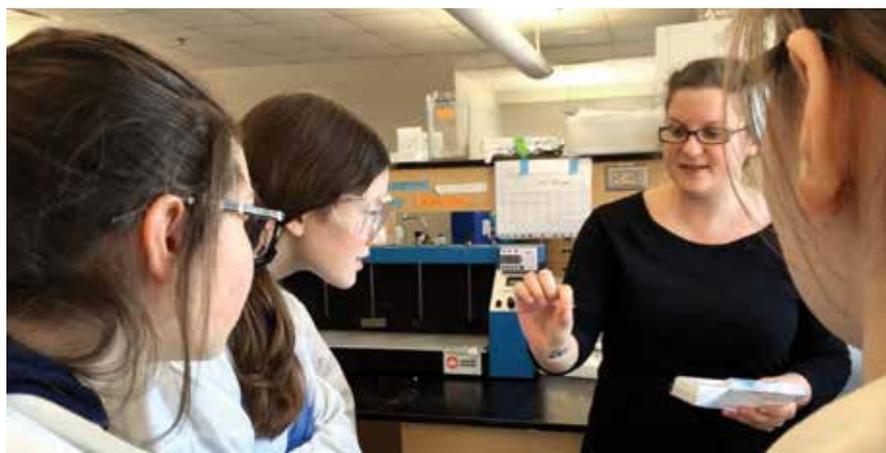


# Techsploration learns about *Water & Wastewater*

On February 24, 2015, a group of eight grade 9 female students and two teachers from Dr. John Hugh Gillis Regional High School in Antigonish, Nova Scotia travelled to Dalhousie University to meet with Dr. Margaret Walsh and two of her graduate students, Melissa Fraser, MSc Candidate and Allison Mackie, PhD Candidate, as part of the NS Techsploration program. Techsploration is a not-for-profit organization that provides opportunity for girls from grades 9 to 12 to be introduced to careers in the science, trades, and technology fields by meeting with female mentors at their place of work.

While at Dalhousie, the girls learned about the field of engineering as a career choice and what municipal water and wastewater treatment involves. They also learned about the emerging issue of plastic microparticles that have been identified in the Great Lakes with measurements from field studies by other researchers showing 1,500 to 1.7 million plastic particles per square mile. One source of these microparticles that are being found in surface water has been linked with plastic microbeads that are added to some personal care products to act as exfoliants.

The girls learned that many products including facial washes, shampoos, soaps, make-up, and sunscreen contain polyethylene or polypropylene microbeads, and enter our wastewater treatment facilities from greywater generated in our homes. Given the buoyant and non-biodegradable properties of these particles, they are difficult to remove in our wastewater treatment plants where we use 'air, bugs and gravity' technology to remove contaminants. In the aquatic environment, many fish species cannot tell the difference between food and a plastic



microparticle, and water scientists are finding them ingested in the digestion tracts of some fish.

The students from Dr. JHG High School were put to work in the Clean Water Lab operated by the *Center for Water Resource Studies* at Dalhousie University to try to isolate and characterize the plastic microbeads in two facial cleaning products. The girls were excited to gear up in white lab coats, safety glasses, and plastic gloves and were led by Melissa and Allison as they performed hands-on experiments to extract microbeads from the cleansers and characterize two synthetic wastewater effluent samples. The lab portion of the day ended with the girls using a Brightwell Microflow

Imaging (MFI) advanced particle analyzer to measure and take images of the microbeads in their prepared water samples.

The girls presented their findings in March to their classmates and at a regional Techsploration event in April 2015. ACWWA and Engineers Nova Scotia graciously provided the girls with gift bags, which were very well received. A mid-morning refreshment break was provided by the Department of Civil & Resource Engineering, and lunch at Your Father's Moustache was covered by the Dalhousie Faculty of Engineering. It was a successful day, and hopefully in the future the girls will consider water and wastewater treatment for a possible career! 

# ABEA NEWS

WWW.ABEA.BIZ

We would like to start out with a big congratulations to Christian Oxner. Christian was the recipient of the 2014 ABEA Scholarship. Christian is the son of Gary Oxner, Superintendent of the Water Supply Plants for the Halifax Regional Water Commission. He will be working towards graduating with a Bachelor of Commerce at St. Mary's University in Halifax.

We would also like to recognize Charlotte Pyke, our 2013 ABEA Scholarship Winner. Charlotte is the daughter of Stephen Pyke, Engineer at OPUS Engineering in Fredericton. She is enrolled in the Interdisciplinary Leadership Program at the University of New Brunswick.

The ABEA Scholarship Program is giving away **FOUR x \$1,000**

scholarships in 2015, which are available to dependents of anyone who is an active member of the ABEA or ACWWA, in Atlantic Canada. Applicants must be accepted into, or currently studying at, a post-secondary educational institution.

Forms and information can be found on our website at [www.abea.biz](http://www.abea.biz).

Tweet, tweet... Share & post... People are following you... GUESS WHAT? We have now joined with the rest of the world and are now on social media!

 **Facebook** is an excellent way to put some fun into your workload; we will be posting photos of ABEA events... such as our ABEA Hospitality Night and Trade Show during the annual ACWWA conference.



**Twitter** is a great source of keeping up to date on what is going on with the ABEA. We can post updates that you will receive instantly, to keep you in the loop as to what is happening.



**LinkedIn** is perfect for keeping members together online. Sharing what is happening in Atlantic Canada with new products and services from our members will help LINK you together, so the ABEA can become the central hotspot for clients to find what they need with just one click.

The Association is always looking for new members. For information on becoming a member, please email Dylan at [dylan.takacs@sansom.ca](mailto:dylan.takacs@sansom.ca). 



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# MAKING WAVES

OCTOBER 4 - 6, 2015

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## Welcome message from the ACWWA Chair

*The theme of this year's conference, 'Making Waves,' could not be more topical given the challenges the changing weather patterns place on those that operate and maintain municipal utilities.*

When I had the opportunity to travel to St. John's in 2007 to attend the ACWWA Annual Conference, I remember being excited to visit Newfoundland and Labrador for the first time. Reflecting on that conference now, I can tell you that the experience did not disappoint.

On behalf of the Board of the Atlantic Canada Water & Wastewater Association, I extend a warm invitation for you to join us in St. John's and attend the 68th Annual Conference from October 4-6 at the Delta Hotel and Convention Centre.

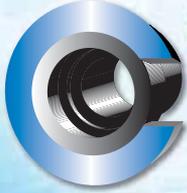
The theme of this year's conference, 'Making Waves,' could not be more topical given the challenges that changing weather patterns place

on those that operate and maintain municipal utilities. Jason Phillips and his conference committee in St. John's have been hard at work organizing an event that delegates have come to trust as the premier Atlantic Canadian water and wastewater industry conference of the year. A robust technical program featuring a broad mix of topics related to potable water, wastewater, and storm water will provide excellent value to those who seek to enhance their knowledge. The ABEA tradeshow will showcase all of the latest industry products and technologies and, most importantly, offers delegates the chance to speak directly with knowledgeable product representatives. Together with all of

the networking events, competitions, and technical tours that combine to provide excellent value for your registration, having the ACWWA Conference back in St. John's where delegates will experience wonderful hospitality in the capital city of Canada's easternmost province makes this year's conference a 'can't miss' event.

Mark your calendars. Plan to attend the 68th ACWWA Conference, and be sure to register early. We look forward to seeing you in St. John's this October!

**Scott Grasman**  
Chair, Atlantic Canada  
Water & Wastewater Association



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## Welcome to the 2015 ACWWA Annual Conference

*This year's conference theme is 'Making Waves'... in Atlantic Canada these 'waves' could include the environment and weather, which provide challenges to the operation of our systems, or they can be viewed as the treatment processes at our water and wastewater treatment facilities.*

Please join us for the 2015 Annual ACWWA conference in St. John's, NL from October 4 to 6; this will mark the 68th year for the conference. The St. John's conference committee has been working hard to prepare a conference program that will appeal to all aspects of the Atlantic Canadian water and wastewater industry. The conference will be held at the Delta St. John's Hotel and Conference Centre, which is located in the heart of downtown, with easy access to the best local attractions, including world-famous George Street and two of Canada's National historic sites – Signal Hill and Cape Spear.

This year's conference theme is 'Making Waves.' This theme is meant to cover all of the challenges and changes which we experience every day in the water and wastewater industry. In Atlantic Canada these 'waves' could include the environment and weather, which provide challenges to the operation of our systems, or they can be viewed as the treatment processes at our water and wastewater treatment facilities.

The conference will start on Sunday with a technical tour of the dissolved air flotation (DAF) treatment process at the Bay Bulls Big Pond water treatment plant and golf in the afternoon followed by the Meet and Greet in the evening. On Monday morning, during the opening session, the major AWWA and WEF awards will be handed out and we will hear from our keynote speaker Gwynne Dyer.

The technical sessions will begin on Monday morning and continue into the afternoon followed by the Top Ops competition. Monday night will provide an opportunity to explore St. John's and dine in one of the many local restaurants or pubs. We will meet later in the evening to experience the ABEA Hospitality night at one of the local bars along the world famous George Street. We will start off Tuesday morning with the annual Awards Breakfast followed by the ABEA Tradeshow, which will provide an opportunity to meet with suppliers and view the latest in new technology and products that are 'Making Waves' in our industry. After the tradeshow we will have the final round of technical sessions followed by the Down East Feast with local entertainment that I'm sure everyone will enjoy. Make plans to reunite with friends and colleagues as we share our Newfoundland hospitality and share your experiences Making Waves in the water and wastewater industry. We hope to see you in St. John's! You can check for conference details and updates anytime by visiting [www.acwwa.ca](http://www.acwwa.ca).

**Jason Phillips, P. Eng.**  
2015 ACWWA Annual Conference Chair



## Keynote speaker Gwynne Dyer

Gwynne Dyer has worked as a freelance journalist, columnist, broadcaster, and lecturer on international affairs for more than 20 years, but he was originally trained as an historian.

Born in Newfoundland, he received degrees from Canadian, American and British universities, finishing with a Ph.D. in Military and Middle Eastern History from the University of London. He served in three navies and held academic appointments at the Royal Military Academy Sandhurst and Oxford University before launching his twice-weekly column on international affairs, which is published by over 175 papers in some 45 countries.

His first television series, the seven-part documentary 'War,' was aired

in 45 countries in the mid-'80s. One episode, 'The Profession of Arms,' was nominated for an Academy Award. His more recent works include the 1994 series 'The Human Race,' and 'Protection Force,' a three-part series on peacekeepers in Bosnia, both of which won Gemini awards. His award-winning radio documentaries include 'The Gorbachev Revolution,' a seven-part series based on Dyer's experiences in Eastern Europe and the former Soviet Union in 1987-90, and 'Millennium,' a six-hour series on the emerging global culture.

In Canada, Dyer's column appears regularly in the *Telegram* in St. John's, the *Halifax Daily News*, the *Fredericton Daily Gleaner*, *Le Soleil* in Quebec City,

*La Presse* in Montreal, *Le Droit* in Ottawa, the *Kingston Whig-Standard*, *NOW* in Toronto, the *Hamilton Spectator*, the *Kitchener-Waterloo Record*, the *Guelph Mercury*, the *Sudbury Star*, the *Thunder Bay Chronicle-Journal*, the *Winnipeg Free Press*, *Prairie Dog/Planet 5* in Saskatchewan, *Vue* in Edmonton, *Fast Forward* in Calgary, *Georgia Straight* in Vancouver, *Times Colonist* in Victoria, and about 40 other newspapers.

Dyer's recent books include 'Ignorant Armies: Sliding into War in Iraq' (2003), 'Future: Tense' (2005) and 'The Mess They Made: The Middle East After Iraq' (2007), all of which were number one or number two on the *Globe & Mail's* non-fiction bestseller list.

## ACWWA 2015 Conference highlights

SUNDAY, OCTOBER 4	MONDAY, OCTOBER 5	TUESDAY, OCTOBER 6
<p><b>9:30 am</b> ACWWA Golf Tournament</p>	<p><b>8:00 am</b> Official Conference Opening</p>	<p><b>7:30 am</b> Best of the Best Water Taste Test</p>
<p><b>1:00 pm</b> Technical Tour – Bay Bulls Big Pond Water Treatment Plant</p>	<p>Fuller / Bedell/ MacNab Awards Ceremony</p>	<p><b>8:00 am</b> ACWWA Awards Breakfast</p>
<p>Dissolved Air Flotation Facility</p>	<p>Keynote Speaker – Gwynne Dyer</p>	<p><b>9:00 am</b> ABEA Tradeshow</p>
<p><b>5:30 pm</b> Young Professional Mixer</p>	<p><b>11:45 am</b> Annual General Meeting Luncheon</p>	<p><b>6:30 pm</b> Water Works Club Reception</p>
<p>Gypsy Tea Room – Water Street</p>	<p><b>3:15 pm</b> Top Ops Competitions</p>	<p><b>7:00 pm</b> Down East Feast</p>
<p><b>7:30 pm</b> Meet and Greet Reception – Harbourview Ballroom</p>	<p><b>5:00 pm</b> Water For People – Fun Walk (or Run) Quidi Vidi Lake – single loop = 3.85 km</p>	
	<p><b>6:00 pm</b> Dine on Your Own</p>	
	<p><b>9:00 pm</b> ABEA Hospitality Night – George Street</p>	



## ACWWA 2015 technical program – Monday, October 5

MORNING			
	10:00-10:30	10:30-11:00	11:00-11:30
<b>Technical Session: A1</b>  <b>SALON B</b>	<b>The sewage recycling system (SRS) – breaking new ground in wastewater treatment</b>  <i>Jean Navert – BioForm Sewage Mining (a Division of Canadian Sewage Mining)</i>	<b>Lakeside wastewater pumping station diversion project</b>  <i>Roger Levesque – Halifax Water</i>	<b>Membrane technology for the treatment of secondary effluents from municipal wastewater systems</b>  <i>*Melissa Fraser – Dalhousie University</i>
<b>Technical Session: A2</b>  <b>SALON C</b>	<b>The design build experience – Corner Brook WTP and Eastern Passage WWTF</b>  <i>Mike Chaulk – CBCL &amp; Rob Gillis – Halifax Water</i>	<b>Emergency repairs to the Lake Major Dam fish ladder</b>  <i>John Eisnor &amp; Rob Gillis – Halifax Water</i>	<b>Regaining process control at the Stellarton WTP</b>  <i>Ben Bickerton – CBCL</i>
<b>Technical Session: A3</b>  <b>SALON D</b>	<b>Metrology and measurements discussion</b>  <i>Ben Van Mierlo – Neptune Technology Group</i>	<b>Impacts of extreme weather related events on water utilities</b>  <i>Jennifer Warner &amp; Kenan Ozekin – Water Research Foundation</i>	<b>The design and construction challenges of open trench watermain replacement</b>  <i>Gary Caul – RV Anderson</i>
Hands-on technical demonstration to be determined			

AFTERNOON			
	1:30-2:00	2:00-2:30	2:30-3:00
<b>Technical Session: B1</b>  <b>SALON B</b>	<b>Condition assessment of prestressed concrete cylinder pipe – St. John's case study</b>  <i>Cameron White – Pure Technologies Ltd.</i>	<b>Effect of orthophosphate on metals release and biofilm formation in annular reactors</b>  <i>*Sarah Butt – Dalhousie University</i>	<b>Controlling lead in drinking water: Phosphate inhibition, lead service line replacement and the role of the water main</b>  <i>*Benjamin Trueman – Dalhousie University</i>
<b>Technical Session: B2</b>  <b>SALON C</b>	<b>Sanitary sewer relining at Dublin Rd. area, St. John's</b>  <i>*Mark Harvey – RV Anderson</i>	<b>MH rehabilitation</b>  <i>Kevin Bainbridge – Robinson Consultants</i>	<b>Diagnostic imaging for in-situ condition assessment of flexible conduits</b>  <i>Stephen McCormick – Inversa Systems</i>
<b>Technical Session: B3</b>  <b>SALON D</b>	<b>The benefits and challenges of a drinking water sector P3 project</b>  <i>Dean Price – City of Saint John</i>	<b>Asset management, meeting your C.A.M.P. requirements and keeping your Gas Tax funding</b>  <i>Hans Arisz – RV Anderson</i>	<b>St. John's regional water system: Planning for the future</b>  <i>Greg Sheppard – CBCL</i>
Hands-on technical demonstration to be determined			

# ACWWA 2015 technical program – Tuesday, October 6

AFTERNOON			
	1:15-1:45	1:45-2:15	2:15-2:45
<b>Technical Session: C1</b>  <b>SALON E</b>	<b>Study on the effectiveness of water treatment plants in Newfoundland and Labrador</b>  <i>*Melissa McComiskey – NL Department of Environment</i>	<b>An assessment of drinking water supply dams in Newfoundland and Labrador</b>  <i>Paula Dawe – NL Department of Environment</i>	<b>A bench-scale study of the effect of pre-ozonation on geosmin removal and natural organic matter</b>  <i>*Dallys Serracin-Pitti – Dalhousie University</i>
<b>Technical Session: C2</b>  <b>SALON F</b>	<b>Aeration basin elimination</b>  <i>Nicholas John Lombardo &amp; Greg Gaffney – Blueingreen</i>	<b>Modeling and optimization of the removal of polycyclic aromatic hydrocarbons (PAHs) from oily wastewater using ozonation</b>  <i>*Liang Jing – Memorial University</i>	<b>Lessons learned – Integral to project management-case study: Eastern Passage WWTF expansion and upgrade project</b>  <i>Ian Guppy – Halifax Water</i>
<b>Technical Session: C3</b>  <b>SALON G</b>	<b>Conservation and efficiency through AMI</b>  <i>Mike Ross &amp; John Wilton – KTI ltd/ Sensus</i>	<b>The case for permanent leak detection on large diameter water transmission mains</b>  <i>Stewart Day – Echologics</i>	<b>Understanding the advantage of pressure flexible plastic pipes</b>  <i>Alois Multerer – Primus Line</i>
	3:00-3:30	3:30-4:00	4:00-4:30
<b>Technical Session: D1</b>  <b>SALON E</b>	<b>Water and wastewater system upgrades at Dalvay National Park, PE</b>  <i>Matt Follett – SNC Lavalin</i>	<b>A practical approach to undertaking a live inspection of a 5.6 km long, 1,200 mm diameter pre-stressed concrete cylinder pipe (PCCP)</b>  <i>David Crowder – RV Anderson &amp; Mike Zantingh from the City of Hamilton</i>	<b>Water analytics research consortium + Yaffle = water quality</b>  <i>Carlos Bazan &amp; *Stefana Egli – Memorial University</i>
<b>Technical Session: D2</b>  <b>SALON F</b>	<b>City of St. John’s – Petty Harbour Long Pond water treatment plant – The long and the short of it!</b>  <i>Jeff Beaty – CH2M Hill</i>	<b>New waves in community education</b>  <i>Joyce Babin – Cape Breton Regional Municipality Water Utility</i>	<b>Securing access to your water distribution system</b>  <i>Jay Morrison – Flowpoint Systems</i>
<b>Technical Session: D3</b>  <b>SALON G</b>	<b>Validation of rapid testing method for microbiological testing in wastewater following UV</b>  <i>*Brian Middleton – Dalhousie University</i>	<b>Use of innovative enzymatic method for the determination of fecal coliforms in waste waters</b>  <i>Gil Ditcher – IDEXX Water</i>	<b>Delivering long-term value for water/wastewater projects</b>  <i>Stefan Dery – PPP Canada</i>

\* Fresh Ideas presenters are a first time Young Professional participant at the ACWWA section conference presenting a water related topic, and will 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 2016) in Chicago, Illinois, representing the Young Professionals of ACWWA. Along with complimentary conference registration provided by the ACE 2016 organizing committee, ACWWA will provide the winner with a stipend to assist with travel costs to the conference.



## 8th Annual ABEA Common Hospitality Reception

The Atlantic Branch Equipment Association is pleased to invite all delegates to the '8th Annual ABEA Common Hospitality Reception' on Monday evening beginning at 9 pm. This event has become one of the premier events of the conference as it allows for social interaction between delegates and the ABEA equipment suppliers.

This year's event will be held at O'Reillys Irish Newfoundland Pub located in the heart of the St. John's entertainment district, George Street. Voted by *enRoute* magazine and Rickards Beer as the #1 Bar in Canada, O'Reillys guarantees you will have "A ROLLICKING NEWFOUNDLAND TIME." As always, live music, dancing, drinks, and snacks will be plentiful.

Please remember your delegate badge for admittance and be sure not to miss out on this private ABEA member sponsored evening.



## 2015 ACWWA companions program

The St. John's conference committee is pleased to offer another great companions program for this year's conference. The City of St. John's is the oldest city in North America and offers a rich history and culture and stunning coastal scenery. The conference hotel is located in the heart of downtown, with easy access to the best local attractions, including world-famous George Street, the East Coast Trail where the rugged coastline and 10,000-year-old icebergs provide stunning scenery for nice hiking or two of Canada's national historic sites – Signal Hill, where Marconi received the first transatlantic wireless signal and Cape Spear, the most easterly point in North America.

The program unofficially starts on Sunday morning with the annual golf tournament, which is open for any golf enthusiasts who wish to register for this event. The golf will commence at 9:30 am and will be held at the Clovelly Golf Club on the Par 72 Osprey course. On Sunday evening at 7:00 pm, the 'Meet and Greet' will provide an opportunity to meet new friends and catch up with past acquaintances. Make plans to reunite with friends as we share our Newfoundland hospitality. We hope to see you in St. John's! You can check for conference details and updates anytime by visiting [www.acwwa.ca](http://www.acwwa.ca).

On Monday morning, the companions are invited to attend the conference opening ceremonies and have an opportunity to hear from the keynote speaker Gwynne Dyer. Following the opening ceremony we will meet at 10:00 am to participate in a chocolate making session at the Newfoundland Chocolate Factory where you will have the opportunity to make your own chocolates! We will then have lunch at a local restaurant followed by a scenic tour of St. John's and its local attractions. After we return there will be an opportunity to explore downtown on your own and dine at one of the many local restaurants. The evening will conclude with the ABEA Hospitality event being held at O'Reillys Pub located on the world famous George Street, only a short walk from the hotel.

Tuesday morning we will visit The Rooms – the provincial museum and art gallery, for a guided art activity and interpretive tour of the art gallery. We will have lunch at the Rooms Café, which offers panoramic views of the city. The rest of the day will be yours to enjoy. We will conclude our program with the Down East Feast, which will be celebrated in Newfoundland style as a 'kitchen party' with a buffet dinner.

## ACWWA Best of the Best water taste test

Come out and enjoy the competition and see who has the best tasting water in Atlantic Canada this year.

For the third time, the ACWWA will be hosting the 'Best of the Best' taste test competition. This is a testament to the care and diligence taken by our water professionals of providing the highest quality and best tasting potable water possible to our consumers, and we keep getting better and better.

Atlantic Canada Municipal water utilities are invited to submit a water sample to be judged by a panel of media and water professionals. Samples will be rated on appearance, smell or lack thereof, taste, and overall impression. Utilities entering this prestigious event would also have the opportunity to supply a description, in your own words, about the taste of your water using whatever bragging rights you could employ to influence the judges decisions – like last year, be creative.

There will be a special award for the best water description. The first place winner will have the opportunity to represent ACWWA at the AWWA annual conference and exposition (ACE) 'Best of the Best' Taste Test in Chicago, IL in 2016.

The competition will take place on Tuesday morning October 6, 2015 at the Awards Breakfast. Entry forms, rules, and judging criteria are available on the ACWWA Conference website. Entry forms are due by September 11, 2015. For more information, please contact Deborah Smith at (709) 745-1870 or [dsmith@stjohns.ca](mailto:dsmith@stjohns.ca).



## Top Ops competitions

Do your water or wastewater treatment plant operators want to make waves at the 2015 ACWWA Annual Conference in St. John's, NL?

If so, register a team for the 11th annual ACWWA Top Ops competitions and let your operators demonstrate their knowledge in a fun and fast-paced contest against the best operators in Atlantic Canada.

The event will include two separate competitions for operators to demonstrate their supremacy in the water and/or wastewater industry. Each team will be comprised of three operators, and the competition is scheduled for Monday October 5 at 3:15 pm. Spectators are encouraged to attend and cheer on their favorite team!

For further information, or to register a team in either the water or wastewater Top Ops competitions, please contact Deneen Spracklin at [dspracklin@gov.nl.ca](mailto:dspracklin@gov.nl.ca) or (709) 729-1158.



## Young Professionals mixer

The Young Professionals Committee is an active group that offers engaging networking and volunteer opportunities for members of ACWWA who are new to the water and wastewater industry. Each year, the committee organizes numerous technical tours, and educational and social events.

We encourage everyone to stop by The Gypsy Tea Room on Sunday evening at 5:30 pm and join our Young Professionals for some tasty finger foods and refreshing conversation.

The Gypsy Tea Room is located at 315 Water Street, just minutes from the Delta Hotel, in the heart of the downtown core. The function will be taking place downstairs in the 'cellar.'

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<b>Water Temperature</b>	<b>&lt;0.5 C</b>

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## 2015 Atlantic Branch Equipment Association Tradeshow

The 2015 Atlantic Branch Equipment Association Tradeshow will be held Tuesday morning at the Delta Hotel.

The show will be held on Tuesday at 9 am and feature up to 65 booths in the main ballroom and foyer area. This popular event provides delegates and participants the chance to network with equipment suppliers as they showcase their companies.

Prepare to be inspired and educated on a wide variety of new and innovative products and services unique to the waterworks industry. Don't miss out on the generous supplier gift giveaways and hospitality. The show will also feature a buffet style lunch, so get there early and find out what the ABEA Tradeshow buzz is all about.



## ACWWA technical tour

### Regional water system – Bay Bulls Big Pond Water Treatment Plant dissolved air flotation (DAF) pre-treatment process

The Regional Water System's Bay Bulls Big Pond Water Treatment Plant, designed and constructed over the period of 1975 to 1978, is the largest of three water treatment plants. In the years since its construction, the treatment plant has undergone various upgrades and expansions including additional pumping and filter capacity, upgrades to ozone system, life safety, SCADA, process control, electrical distribution, and most recently the addition of the pre-treatment process dissolved air flotation (DAF).



Dissolved air flotation is highly efficient in pre-treating low turbidity raw water to provide pathogen, colour and algae removal, turbidity reduction and improved filter performance. As a result of pumping upgrades to facilitate implementation of the DAF process, the peak plant production increased to 126,000 cubic meters per day, 126 megalitres per day or 27.7 million gallons per day.

With assistance from design and engineering consultants NDAL and CH2MHill, the DAF pre-treatment process was commissioned and put into service in November 2013. Since the startup of the pre-treatment process, Regional Water staff have observed improvements in plant effluent water quality. Ozone demand and chlorine dosages have been decreased and plant effluent UV transmittance has improved. Additionally, chlorine disinfection by-products such as THMs and HAAs have been reduced throughout the distribution system to less than 5 mg/L.

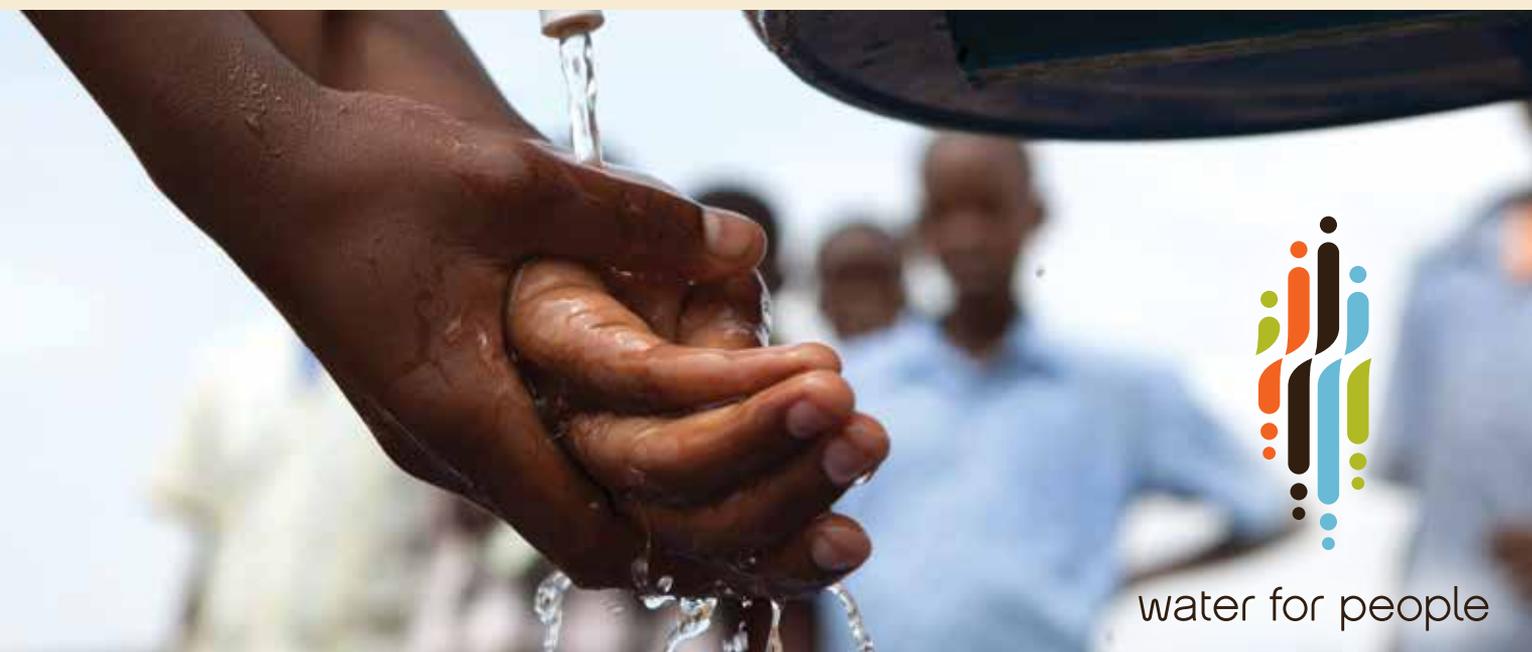
## Down East Feast entertainment: Rising Tide Theatre

Rising Tide Theatre has put together a show sure to entertain, including stories of traditional Newfoundland with a comical twist. For over 30 years Rising Tide has been entertaining locals and tourists alike, most notably through their Seasons in the Bight theatre festival in Trinity and their annual Revue tour.



Revue is a political and social look back at the year that was, providing audiences with a hilarious evening of satirical skits and songs. Revue tours across the province every year and is created collectively with some of the best writers and performers in Newfoundland and Labrador.

Many locals and up to 20,000 tourists from all over the world head out to Trinity each year to partake in Rising Tide's Seasons in the Bight theatre festival – a celebration of the culture and heritage of this great province.



water for people

## Support Water For People – Canada

In 2014, Water For People made significant progress towards our vision of a world where all people have access to clean water, adequate sanitation, and basic health services. Water For People is the AWWA designated charity of choice, and is also endorsed by the Water Environment Federation, the Water Quality Association, the National Association of Water Companies, the National Association of Clean Water Agencies, and the Association of Metropolitan Water Agencies. The ACWWA chapter donations totaled more than \$20,000 at the 2014 conference. This came from corporate, individual, associations, and generous utilities. A special thanks goes out to the ABEA (\$7,500), the City of Moncton (\$5,000), Town of New Glasgow (\$2,500) and CBCL Limited (\$1,000). Remaining funds were raised through conference events. In recognition of World Water Day, (March 22), the Atlantic Canada Committee of Water For People Canada hosted its 8th annual Well Tapped event on Saturday, March 21 at Garrison Brewery, Halifax, NS raising more than \$1,000. ACWWA

will continue to support the goals of Water For People to bring together local entrepreneurs, civil society, governments, and communities to establish creative, collaborative solutions that allow people to build and maintain their own reliable safe water systems. Empowering everyone transforms people’s lives by improving health and economic productivity to end the cycle of poverty.

The Water For People organization website ([www.waterforpeople.org](http://www.waterforpeople.org)) provides information about the organization, inspiring stories, blogs, news and publications, what they do and information on how you can become involved as well as provide personal donations. Any questions about Atlantic Canada’s involvement with Water For People can be directed to the ACWWA chair for Water For People, Matt Follett, at [Matthew.Follett@snclavalin.com](mailto:Matthew.Follett@snclavalin.com).

We are all excited about ‘Making Waves’ at this year’s 2015 Annual Conference in St. John’s, Newfoundland to raise funds in support of the Everyone Forever Water For People Campaign through the following activities:

### FUN WALK/RUN

This year’s venue is a scenic 3.85 km trail that loops around the Quidi Vidi Lake and will take place from 5–6 pm on October 6, 2015.

### 50/50 DRAWS

Tickets will be sold at the Meet and Greet Reception held from 7:30–11:00 pm, October 4 at the Harborview Ballroom.

### TABLE SELECTION AT DOWN EAST FEAST

We will be auctioning off the first and second tables of the Down East Feast that will get the privilege to experience this year’s meal before the rest of the conference attendees.

### SILENT AUCTION

If you are looking for unique memorabilia, gift certificates, art, jewelry, electronics, or something special for someone be sure to stop by and place your silent bid on a variety of unique auction items that will be on display throughout the conference.



## ACWWA 2015 annual golf tournament

Join us on Sunday October 4,  
at Clovelly – The Osprey.  
Tee times will commence at 9:30 am.  
Price (\$70) includes both green fee  
and shared cart.

All are welcome – and encouraged  
– to join us for this annual event  
where you can enjoy the company  
of old acquaintances and make  
new ones along the way.

The Osprey is one of Atlantic  
Canada's premier golfing facilities  
– routed through the traditional  
landscape of the Avalon Peninsula  
– natural wetlands, small scenic  
ponds, and surrounding forest. An  
excellent mix of holes is showcased  
by our demanding, yet playable Par  
5's, short and medium length Par  
3's, and a perfect mix of Par 4's. The  
course can play differently every  
day due to the varying winds off  
the Atlantic, which will provide a  
challenge to every golfer.



[www.clovelly.ca/  
golf/the-courses/the-osprey/](http://www.clovelly.ca/golf/the-courses/the-osprey/)  
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*\*\*If you have particular requests for your  
foursome, please indicate this by emailing  
[scotiatech.main@ns.sympatico.ca](mailto:scotiatech.main@ns.sympatico.ca) upon  
completion of your registration.*

**NOTE:** Due to ordering deadlines, only  
those who register prior to September 1  
will be guaranteed a clothing item.



## Conference hotel information

The conference will be held at the Delta St. John's Hotel & Conference Centre  
located at 120 New Gower Street, in St. John's, Newfoundland and Labrador.

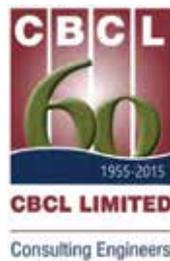
One of the oldest cities in North America, St. John's is a uniquely charming  
and eclectic destination; cradled in a harbor carved from 500-million-year-  
old rock, the area is rich with history, rife with culture and sprawling with  
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wireless internet access, and complimentary in-room coffee. The hotel offers  
a fitness centre with heated pool, assorted exercise equipment, squash courts,  
sauna and whirlpool.

A special conference room rate starting from \$214 plus taxes is in place  
from September 30 – October 9, 2015. Please reserve your room by August 31,  
2015 to receive this rate. 

Reserve your room today by calling 1-888-793-3582 or follow  
the link on the ACWWA webpage at [www.acwwa.ca](http://www.acwwa.ca).

## THANKS TO OUR SPONSORS:



# Conference registration

PART 1 – GENERAL INFORMATION			
FIRST NAME	LAST NAME	ORGANIZATION	
MAILING ADDRESS		CITY	
PROVINCE	COUNTRY	POSTAL CODE	AWWA/WEF MEMBERSHIP NUMBER
PHONE	FAX		
REGISTERED	COMPANION EMAIL ADDRESS		
<b>Sector</b> <input type="checkbox"/> Utility <input type="checkbox"/> Supplier <input type="checkbox"/> Contractor <input type="checkbox"/> Consultant <input type="checkbox"/> Student <input type="checkbox"/> Academic <input type="checkbox"/> Regulator <input type="checkbox"/> Other			

PART 2 – REGISTRATION			
Full Conference Delegate – On or Before September 11, 2015	<input type="checkbox"/> Member – \$475	<input type="checkbox"/> Non-Member – \$525	\$
Full Conference Delegate – After September 11, 2015	<input type="checkbox"/> Member – \$575	<input type="checkbox"/> Non-Member – \$625	\$
Companion Program	<input type="checkbox"/> Member/Non-Member – \$250		\$
Student (Includes Meet & Greet, Lunches, Awards Breakfast and Trade Show)	<input type="checkbox"/> Member/Non-Member – \$100		\$
Monday Full Day Pass (Includes AGM Lunch and ABEA Hospitality Reception)	<input type="checkbox"/> Member – \$250	<input type="checkbox"/> Non-Member – \$275	\$
Tuesday Full Day Pass (Includes Trade Show & Lunch and Down East Feast)	<input type="checkbox"/> Member – \$250	<input type="checkbox"/> Non-Member – \$275	\$
Tuesday 1/2 Day Trade Show Pass (Includes Trade Show Lunch)	<input type="checkbox"/> Member – \$125	<input type="checkbox"/> Non-Member – \$150	\$
<b>Register before August 7 and be entered for the early bird draw</b>			<b>Part 2 – Subtotal</b> \$

PART 3 – TRADE SHOW BOOTH RENTAL & EXHIBITOR REGISTRATION			
Booth Rental (Max 3 Booths & 2 People/Booth)	ABEA Member – ___Booths @ \$500	Non-Member – ___Booths @ \$850	\$
Extra Exhibitor Registration <i>(includes Meet &amp; Greet, ABEA Hospitality Reception and Trade Show Lunch)</i>	ABEA Member – ___@ \$75	Non-Member – ___@ \$100	\$
Exhibitor registration does not include the full conference. To attend full conference, please register as a Delegate in Part 2			
EXHIBITOR'S NAME	EXHIBITOR'S NAME	EXHIBITOR'S NAME	
EXHIBITOR'S NAME	EXHIBITOR'S NAME	EXHIBITOR'S NAME	
EXHIBITOR'S NAME	EXHIBITOR'S NAME	EXHIBITOR'S NAME	
			<b>Part 3 – Subtotal</b> \$

PART 4 – MEALS & ACTIVITIES			
<b>Sunday, October 4</b>		<b>Please indicate Attendance by checking box</b>	
Golf (transportation not included)	Shirt: S___ M___ L___ XL___ XXL___	___ @ \$70 =	\$
Technical Tour – Dissolved Air Flotation Facility – Bay Bulls Big Pond Water Treatment Plant		___ @ \$10 =	\$
Young Professionals Mixer (Included)	<input type="checkbox"/> Delegate	<input type="checkbox"/> Companion	<input type="checkbox"/> Exhibitor ___
Meet & Greet (Included)	<input type="checkbox"/> Delegate	<input type="checkbox"/> Companion	<input type="checkbox"/> Exhibitor ___
<b>Monday, October 5</b>			
Pick-up Breakfast	<input type="checkbox"/> Delegate	Companion	Included
Annual General Meeting Luncheon (Included for Delegate)	<input type="checkbox"/> Delegate	<input type="checkbox"/> Exhibitor ___ @ \$60 \$	
Companion's Luncheon (Included with Companion Program)		Companion	
ABEA Hospitality Reception (Included)	Delegate	Companion	<input type="checkbox"/> Exhibitor ___



## Conference registration

Tuesday, October 6			
Awards Breakfast	<input type="checkbox"/> Delegate	<input type="checkbox"/> Companion	Included
			<input type="checkbox"/> Exhibitor ___ @ \$40
Trade Show Luncheon (Included)	<input type="checkbox"/> Delegate	<input type="checkbox"/> Companion	<input type="checkbox"/> Exhibitor ___
Down East Feast (BUFFET – cod/salmon/chicken/beef)	<input type="checkbox"/> Delegate	<input type="checkbox"/> Companion	Included
			<input type="checkbox"/> Exhibitor ___ @ \$85
Please describe any dietary restrictions or other special needs you may have			<b>Part 4 – Subtotal</b> \$

PART 5 - TOP OPS COMPETITION REGISTRATION			
Top Ops Team Registration	<input type="checkbox"/> Water	<input type="checkbox"/> Wastewater	___ Team @ \$50.00 \$
To complete team registration contact Deneen Spracklin at (709) 729-1158 or <a href="mailto:dspracklin@gov.nl.ca">dspracklin@gov.nl.ca</a>			<b>Part 5 – Subtotal</b> \$

PART 6 – FEES	
	<b>Subtotal</b> \$
	Life Members deduct \$100.00 \$
	13% HST (869 924 910 RT2) \$
	Water For People Fun Run/Walk ___ @ \$25.00 \$
	<b>Total Amount Due</b> \$

PART 7 – PAYMENT OPTIONS			
Choose payment method. Complete as appropriate.			
<input type="checkbox"/> Cheque	<input type="checkbox"/> Money Order	<input type="checkbox"/> Visa	<input type="checkbox"/> Mastercard
Please make cheque or money order payable to "ACWWA 2015 Conference", Box 28142, Dartmouth, NS B2W 6E2			
CARD HOLDER NAME			
CARD NUMBER			EXPIRY
Fax: 902-435-7796 or Email: <a href="mailto:contact@acwwa.ca">contact@acwwa.ca</a>		EMAIL ADDRESS	
<b>WHEN PAYING WITH A CREDIT CARD AN EMAIL ADDRESS IS REQUIRED FOR A RECEIPT TO BE ISSUED</b>			

### CONFERENCE INFORMATION

Full conference has a 1.5 CEU value.

### TRADE SHOW INFORMATION

Each booth measures 8' x 10' in the main ballroom and 6' x 10' in the hallway/lobby. Booth selection will be online and first come first-served. ABEA members will have exclusive access for one week prior to general public. Contact the ABEA to learn more about becoming an ABEA member, Cathy Cameron at [scotiotech.main@ns.sympatico.ca](mailto:scotiotech.main@ns.sympatico.ca). For trade show questions contact Steve Philpott at [steve.philpott@canadapipe.com](mailto:steve.philpott@canadapipe.com).

### ACWWA CANCELLATION POLICY

Cancellations must be received in writing, on company letterhead, and faxed, mailed or emailed to the ACWWA Office. Phone cancellations are not accepted. All cancellations postmarked/fax-dated 14 days in advance of the conference start date will receive a full refund, minus a 10% administrative fee. Cancellations between 7 and 14 days of the conference start will receive a 50% refund. Cancellations less than 7 days in advance of conference will not be refunded. Please note that substitute registrants are welcome. Fax requests for substitutions or cancellations to (902) 435-7796 or email to [contact@acwwa.ca](mailto:contact@acwwa.ca).



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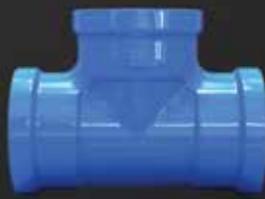
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